Explorations in Economic History 47 (2010) 68–81

Contents lists available at ScienceDirect

Explorations in Economic History

journal homepage: www.elsevier.com/locate/eeh

"Un-American" or unnecessary? America's rejection of compulsory government health insurance in the Progressive Era ☆

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ARTICLE INFO

Article history:
Received 14 July 2008
Available online 21 May 2009

Keywords:
Health insurance
Social insurance
Self-insurance
Savings
Progressive Era

ABSTRACT

Between 1915 and 1920, 18 U.S. states considered the introduction of compulsory health insurance. Progressive reformers expected state health insurance to be welfare enhancing for American wage-workers since it would result in lower cost insurance and an extension of coverage to more of the population. The evidence presented in this paper indicates that the absence of broad political support for health insurance legislation in this early period reflects that compulsory insurance would not have improved on what was available and affordable through voluntary arrangements and had the potential to reduce the welfare of wage-earners.

1. Introduction

Progressive reformers in the U.S. interpreted state provided health insurance as the necessary and inevitable response to the moral and economic inadequacies of voluntary insurance and self-help arrangements in protecting households against the consequences of sickness.[1] Given the developments in Europe and the introduction of Worker's Compensation in many states before World War I, the reformers believed that government health insurance was the next step in social progress for the U.S.[2] At the impetus of the American Association for Labor Legislation (AALL), between 1915 and 1920, as many as 18 U.S. states investigated but rejected compulsory-state health insurance (CHI). The AALL reformers and many scholars today consider this outcome to be a policy failure and significant for explaining why the U.S. does not have, and is unlikely to have in future, national health insurance.[3]

☆ This work is funded by SSHRC Research Grant 410-2005-0529. I thank Sharon Neary and Gisela Engels from Information Resources at the University of Calgary's MacKimmie Library for their assistance with obtaining the 1888–90 Cost of Living Data from the ICPSR; and Ken Fyie for his research assistance. I have benefited from comments of seminar participants at the University of Colorado, Yale University, the University of Western Ontario and the TARGET Workshop held at the University of British Columbia, October 2005. I also wish to acknowledge the comments of Lee Alston, David Beito, Daniel Beland, Ann Carlos, George Emery, Price Fishback, David Green, Tim Guinnane, Beatrix Hoffman, Michael Huberman, Frank Lewis, Carolyn Moehling, John Murray, Don Paterson and Melissa Thomasson.

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[1] Peebles (1936), Gilbert (1966), Lubove (1968), Rodgers (1998), Horrell and Oxley (2000), Hoffman (2001), Kaufman (2002), Quadagno (2005).

[2] Rubinow (1931) argued that health insurance was the "next step in social progress" in 1916 but by 1930, "that particular step has not been taken." See Moss (1996).

[3] Lubove (1968, pp. 2–3), Fox (1983, p. 599), Hoffman (2001). Most explanations emphasize unique American ideology, and/or institutional structures, and/or interest group powers that are slow to change (Beland and Hacker, 2004). Quadagno (2005) argues that powerful interests (Doctors and Insurance companies) have always prevented Congress from passing national health insurance legislation. Lindert (1994, p. 28) suggests that the peculiar distaste that Americans have for government aid is durable. Bundorf and Fuchs (2007) suggest that national health insurance will only be introduced in the U.S. if there a significant change in American attitudes and beliefs toward government health insurance.

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doi:10.1016/j.eeh.2009.05.003

If CHI was efficiency enhancing and stood to have made some or all wage-workers better off as the AALL reformers argued, then why were legislators and political "brokers" unable to evoke the necessary political action for its introduction? Anderson (1968, 1987) argues that the indifference of Americans towards compulsory health insurance in this early period left organized groups, such as doctors and life insurers, with political clout and vested interests in the defeat of CHI to determine the outcome. Social reformers such as the members of the AALL interpreted public indifference to CHI as evidence that wage-workers were either ignorant of their true needs for economic security, and/or ideologically driven to reject social insurance as "un-American" despite their dire needs for the programs. In contrast, business organizations, employers associations and insurance companies argued that the indifference of American wage-earners to CHI reflected that they did not need it due to their earning power. Americans had a capacity to save and to purchase insurance coverage through voluntary arrangements.

For government action on CHI to have been politically profitable for legislators and political brokers, significant failures in private markets must have existed for CHI to be a welfare enhancing institutional alternative to the market. To assess this condition for the political viability of CHI in the U.S., I quantify the frequency and duration of work-related disability and I use these estimates to value the expected insurance costs and benefits of the proposed AALL CHI legislation and available voluntary arrangements. This comparison shows that despite the AALL reformers' concerns for the lower earning wage workers, their proposed CHI contract did not offer any advantages to this target group over what was available through voluntary arrangements. The analysis provides empirical support for Costa's (1995) suggestion that CHI was, at best, an expensive duplication of insurance available through voluntary avenues.

Rodgers (1998, p. 243) describes how some proponents of compulsory health insurance in the United States viewed social insurance like CHI as nothing more than a complicated scheme for compulsory savings. The main purpose of CHI would have been to compel wage-workers to purchase higher levels of insurance coverage. Even though CHI was expensive, it could still have been welfare enhancing for wage-workers if households lacked the necessary surplus in their budgets to purchase the voluntary-insurance contracts. My estimates of household budget surpluses from data from the 1888–90 U.S. Commissioner of Labor Cost of Living study and the 1917–19 BLS Cost-of-Living Survey show that, contrary to the claims and evidence of the AALL reformers, American wage-workers could insure against sickness without CHI. Further, the capacity to self-insure, or purchase insurance coverage, increased over the life-cycle, and for wage-workers under age 40, it increased between the late nineteenth century and 1920. CHI would have locked Americans into saving for a single purpose for the length of their working lives even though the need for this insurance coverage was primarily at younger ages. The commitment of so much of household income to the insurance of a single risk was not necessarily desirable. Unlike CHI, the household's savings could be used for covering any losses of income due to illness, or unemployment.

The evidence in this paper supports that the suggestions of Costa (1995), Emery and Emery (1999), Beito (2000), Emery (2006) and Murray (2007) that CHI would not have been welfare improving for American wage-earners which in turn can explain the lack of political support for the legislation in the Progressive Era. Emery and Emery (1999), Beito (2000), Emery (2006) and Murray (2007) provide evidence that voluntary insurance funds of fraternal orders, unions and work-placed based groups were competently managed and provided meaningful assistance to the members of these organizations as late as the Depression of the 1930s. These studies provide necessary, but not sufficient, evidence to refute the progressive reformers' views that voluntary sickness insurance was an inadequate alternative to CHI. Progressive reformers acknowledged that voluntary funds worked well for the better paid of the wage-earning classes but they believed that CHI was necessary to extend coverage to the lower wage earners who would never be covered in the voluntary arrangements. As such, showing the competence of these organizations and the self-insurance capabilities of the better paid wage earners who belonged to them cannot refute the reformers' claims about the societal need for social insurance. Evidence that voluntary-insurance contracts were affordable for lower wage-earners provides direct evidence to address the reformers' case.

2. The historical background for compulsory-state health insurance in the U.S.

During the nineteenth and early twentieth century, lost income due to illness was one of the greatest risks to a wage earner's household's standard of living in North America and Europe.[4] Before 1920, lost income was the important cost of illness for workers and, consequently, sickness/health insurance in this earlier era was for income stabilization, which was thought to be useful for the prevention of poverty.[5] Prior to the introduction of state health insurance programs in Europe, similar "patch-

[4] Rubinow (1913a), Armstrong (1932), Numbers (1978), Horrell and Oxley (2000), Hoffman (2001).

[5] The costs of sickness and poor health include lost income, direct medical costs of hospitalization, physician care and medicine, and for society, lost productivity. By the late 1920s, costs associated with medical treatment and hospitalization equaled the size of income loss (Davis, 1934) and were the larger cost by the 1940s due to technical change in medical treatment, the organization of care around hospitals and the growing strength of Medical Associations in North America (Starr, 1982; Thomasson, 2002). Armstrong (1932, p. 334) reports that in 1915, for government health insurance arrangements the proportion of health insurance benefits paid in cash versus "in kind" ranged from 42% to 98%. By the late 1920s, these proportions ranged from 16% to 56%. Commercial and non-profit group health and hospital insurance plans rose to primacy in the sickness and health insurance field in North America after 1930 (Applebaum, 1961; Follmann, 1965; Davis, 1989; Thomasson, 2002).

works of protection"[6]— issuing from mutual-aid organizations, trade unions, commercial insurers, discretionary charity and self-reliance through thrift — were available to workers on both sides of the Atlantic.[7]

Reformers and many scholars concluded that the obvious shortcomings of the voluntary arrangements were the impetus for government involvement in social insurance arrangements.[8] Rodgers (1998, pp. 218–219) described the voluntary mutual assistance arrangements in the North Atlantic economy as "both a fixture of everyday life and inadequate to it, far-flung and full of holes." [9]Many authors characterized the self-help organizations like the friendly societies as plagued by financial problems due to aging memberships and a lack of understanding of actuarial insurance pricing.[10] Voluntary insurance arrangements did not appear to have covered the poorest classes of workingmen most in need of protection and even for the populations that they did cover, the cash benefits were alleged to be too small to provide true help to those in need.[11]

Between 1883 and 1914 in several countries in Europe, the administrative machinery of friendly societies and other mutual-aid organizations was the vehicle for introducing and delivering compulsory-government sickness/health insurance.[12] Compulsory health insurance arrangements implemented by government closely resembled the contracts of the voluntary mutual-aid organizations.[13] The important differences between the voluntary arrangements and compulsory (government) arrangements were the sources of finance, the extent of coverage in the population, and the coverage of the costs of medical services. Government health-insurance coverage typically excluded wage-earners above an income ceiling, the self employed, agricultural workers, and often, dependents of workers.

Governments in the U.S. showed little activity on the health/sickness insurance field prior to World War I. The origin of the government compulsory health insurance movement in the United States was the formation of the American Association for Labor Legislation (AALL) in 1906.[14] In 1912, the AALL recommended some form of insurance to offset income losses associated with accident and illness and in 1914 the AALL circulated their model for legislation for a public health insurance system. Between 1915 and 1920, as many as 18 U.S. States investigated CHI.[15] California and New York had the most advanced developments towards introducing legislation but the CHI movement was over by the start of the 1920s.[16]

3. The historical controversy over the failure of CHI in the Progressive Era

By 1920 the AALL appeared to be the only group in favor of government health insurance in the U.S. Business, private (life) insurers, medical professionals and some prominent unions were allied against Compulsory Health Insurance. Reformers expected that the gains for industrial wage-workers from CHI to be large enough to mobilize workers' interests to aid in the passage of CHI so they were surprised by the indifference of the general public to their cause.[17] The AALL believed that wage-earners needed CHI due to the shortcomings of voluntary arrangements, including the capacity of households to save. The AALL proposed that employers and state governments pay 60% of the cost of insurance to provide workers with generous

[6] This term is from Hoffman (2001, p. 6).

[7] Rodgers (1998, pp. 219–220) asserts that the system of workers' mutual assistance in the United States was extensive and comparable in structure to that of contemporary Europe. See also Rubinow (1913a). Gosden (1961, 1973), Gilbert (1966), Johnson (1985), Hopkins (1995) and Riley (1997) discuss friendly societies in England. Starr (1982), Rodgers (1998) and Murray (2003, 2007) discuss voluntary sickness insurance arrangements in Europe. Rodgers (1998), Emery and Emery (1999), Beito (2000) and Murray (2007) discuss sickness insurance arrangements in North America.

[8] Rubinow (1913b), Peebles (1936), Gosden (1961), Gilbert (1966), Hopkins (1995), Horrell and Oxley (2000) and Murray (2007).

[9] See also Horrell and Oxley (2000, p. 54), Hoffman (2001, p. 9), Lubove (1968, p. 17).

[10] Kip (1953), Gosden (1961, 1973), Gilbert (1966), Lubove (1968), Tishler (1971, p. 69), Hoffman (2001), Kaufman (2002), Murray (2003). This generalization concerning the financial soundness of fraternal sickness insurance is not supported by the experience of the IOOF in North America (Emery, 1996, Emery and Emery 1999; Emery 2006), or by the experience of industrial sickness funds in the U.S. (Murray, 2007).

[11] Studies of British friendly societies suggest that friendly society membership was the "badge of the skilled worker" (Gilbert, 1966, p. 166; Johnson, 1985; Hopkins, 1995; Riley, 1997). The lack of coverage of poorer classes of workingmen in North America is discussed in Rubinow (1913b, p. 166), Chamberlain (1914, p. 53), Fisher (1917), and Emery and Emery (1999). See Horrell and Oxley (2000, p. 54) and Hoffman (2001, p. 9) for a discussion of the cash benefit deficiencies. Beito (2000) demonstrates that fraternal insurance did cover disadvantaged groups in the American population.

[12] See Rubinow (1913a,b), Armstrong (1932), Starr (1982), Murray (2007, p. 23).

[13] For a description of continental Europe sickness funds see Murray (2003), Murray (2007, pp. 22–23).

[14] Anderson (1968), Rodgers (1998), Moss (1996), Hoffman (2001), Murray (2007). By 1913 had 3300 members consisting largely of academics, academic physicians, intellectuals and social reformers.

[15] See Anderson (1968), Hoffman (2001, p. 2), Lubove (1968, p. 67) and Moss (2002, p. 174) and Murray (2007, p. 19). Lubove (1968, p. 67) states that versions of the AALL draft bill for CHI were introduced into the New York, Massachusetts, New Jersey and 15 other state legislatures in 1916 and 1917. Lapp (1920) lists 11 official state commissions that reported on compulsory health insurance.

[16] In 1917, the California State Senate and State Assembly both passed the proposed constitutional amendment that would have allowed the State's legislature the power to introduce government health insurance but the 1918 referendum on the health insurance amendment went down to defeat by almost a three to one margin (Numbers 1978, p. 81; Moss 1996, p. 151). The New York Senate passed legislation for government health insurance in 1919, but the Davenport–Donohue Bill never made it to a vote in the Assembly (Murray, 2007, p. 19). See also Moss (1996), Beito (2000), Hoffman (2001). See Epstein (1933, vii), Hirsh (1939, p. 108), Anderson (1950), Starr (1982) for discussions of the absence of a CHI movement in the 1920s.

[17] Hirsh (1939, pp. 106, 108), Anderson (1950, p. 370). Rubinow (1934, p. 214) identified this lack of support amongst Americans as the reason why it appeared that "everybody was against it". Anderson (1968, p. 87) observes that "during this early period of agitation for health insurance, there was no broad base of support – or, for that matter, of opposition. The fight was between individual giants on Olympus, to which the general public seemed to pay only passing interest."

levels of insurance coverage and to extend insurance coverage to the lowest paid and most vulnerable of the wage-earning classes.[18] The AALL reformers expected social insurance as exemplified by CHI to redirect market forces to reduce the risks of disease, accident and idleness with gains for employers, workers, their families and their communities that paid poor relief.[19]

Rubinow (1931, p. 185) blamed the failure of the AALL health insurance movement on the failure of the reformers to adequately educate labor "to appreciation of its own interests" to overcome ideological biases that compulsory health insurance was an "un-American" subversion of individual initiative and self-reliance.[20] After World War I the AALL accepted opponents' arguments that health insurance too "socialist" and too "Prussian".[21] Opponents of CHI interpreted the indifference of the public toward CHI as support for their view that high wages, voluntary thrift, voluntary insurance and public health initiatives were workable alternatives to state insurance.[22]

The AALL reformers recognized that the wages of Americans were higher than for European workers, but the reformers believed that they were still inadequate for American households to accumulate and protect themselves against economic hardship from events like sickness, unemployment, old age and invalidity.[23] Rubinow (1913a) judged that the high American cost of living and "American Standard of life" resulted in a large majority of wage-workers having insufficient income to maintain a "normal" standard of living and to have a surplus. According to Rubinow, "saving for all possible future emergencies must necessarily mean a very substantial reduction of a standard already sub-normal."[24]

Fox (1983) suggests that most scholars who have studied the failure of the United States to enact CHI have accepted the reformers claims uncritically, particularly with respect to the needs of wage earners for CHI. Believing that American wage-earners would have been better off with CHI than with continuing to rely on voluntary arrangements for meeting the costs of illness, scholars have identified exceptional American ideology, political institutions and interest group powers to explain this policy failure.[25] This class of explanations for the failure of the AALL CHI movement cannot provide a satisfactory explanation for the failure of the CHI movement, or the disinterest American wage workers in government health insurance.[26] The AALL view that American wage-workers needed CHI that has directed the scholarly investigations of the policy-failure interpretation of the lack of CHI in the U.S. has not been critically appraised. In short, we need to know what wage-workers would have gained from CHI and whether enough Americans expected to gain from compulsory health insurance to deliver the necessary political clout.

[18] AALL (1916, p. 239). See also Moss (1996).

[19] Anderson (1968, pp. 58–59), Lubove (1968, p. 76), (Moss 1996, pp. 60–64) and Hoffman (2001, pp. 96–100). According to Moss (1996), the reformers believed that the central problem of industrial society was that the employer assumed no responsibility for a worker's human capital. When a worker fell sick, was injured on the job or was not needed when production fell, the community and the family supported the idle worker. The family and community were third parties to the labor contract, and wage contracts failed to internalize the external costs of industrial society. The Illinois and Wisconsin commissions that investigated health insurance concluded that there was no evidence that CHI promoted health. The Illinois commission concluded that it would be unfair to charge industry with any of the cost of sickness among wage-workers and their dependents (Ransom, 1920, p. 44; Lapp, 1920, p. 32).

[20] Rubinow (1913b) argued that the American "fetishism of self-help" was a powerful force that prevented the introduction of compulsory social insurance. According to Fisher (1917, pp. 14–15), the logic of this claim that CHI was an "un-American interference with liberty" meant that "in order to remain truly American and truly free", was "to retain the precious liberties of our people to be illiterate, to be drunk, and to suffer accidents without indemnification, as well as to be sick without indemnification."

[21] According to Numbers (1978, p. 25) anti-Prussian sentiment was an important reason that the AALL followed the British approach of calling their proposed arrangement "health insurance" rather than using the German term for the arrangement, "sickness insurance", even though the AALL had modeled their proposed CHI legislation on the German rather than the British system.

[22] Hoffman (2001, pp. 54, 58), Murray (2007, pp. 20–21). Sombart (1906, 1976) suggested that American wage-workers had little reason to look to the state to improve their well-being since they could expect gains in their material well-being because the benefits of growth were shared between labor and capital.

[23] Rubinow (1913a, 1934), Epstein (1933), Murray (2007, pp. 145–150). From Moss (1996, p. 137), "careful observers estimated that typical working families saved less than a single week's income per year."

[24] Rubinow (1913a, p. 9). At a time when average annual earnings were $600, Rubinow (1913a, p. 32) assessed that "Families having from $900 to $1,000 a year are able, in general, to get food enough to keep body and soul together, and clothing and shelter enough to meet the most urgent demands of decency." Accumulation, savings, or extra income could not provide legitimate protection if they were not the product of one earner per household and if the other standards of decency in consumption were not met (Epstein 1933, p. 101). Rubinow (1913a, p. 34), declared financial accumulation gained by having women and children to work to be a "vice of thrift". Scholars have interpreted this notion of a minimum standard of decency in consumption as an insufficiency of income to meet subsistence needs. See Moss (1996, p. 137), Hoffman (2001), Moss (2002, p. 7) and Glenn (2001, p. 640).

[25] See Lubove (1968, pp. 2–3), Numbers (1978), Costa (1995), Hoffman (2001, Chapter 3) and Quadagno (2005) for a discussion of how the ideology of voluntarism undermined government efforts to meet the health needs of Americans. See Starr (1982), Costa (1995), Moss (1996), Beland and Hacker (2004) and Boychuk (2008) for a discussion of the role of American political institutions in the failure of the CHI movement. U.S. political power was too decentralized to facilitate the introduction of government health insurance and other large-scale social programs. Constitutional limits prevented the federal government from introducing national health insurance and constrained state government actions. Lapp (1920, p. 32) indicates that the Wisconsin commission on health insurance that reported in 1919 concluded that state contributions for CHI would be unconstitutional. Moss (1996, pp. 156–157) argues that the threat of a "competitive disadvantage" for states introducing CHI compared to states that did not was a critical impediment for the CHI movement. Social insurance in Europe and England was intended to address "social discontent" or "socialist unrest" and ensure worker loyalty to the state rather than to Labor interests. In the absence of threat to political stability in the U.S., interest groups had no incentive to develop legislation through compromise (Gilbert, 1966; Sombart, 1906, 1976; Starr, 1982). See Anderson (1950, 1968), Numbers (1978), Fox (1986), Moss (1996, p. 157), Beito (2000), Hoffman (2001), Engel (2002), Kaufman (2002), Quadagno (2005), and Murray (2007) for discussions of interest group explanations for the failure of CHI in the progressive era.

[26] See Murray (2007, Chapter 2). For example, Rodgers (1998, p. 255) claims that the American debates over social insurance were similar to the "polarized rhetorical contests in Germany in the 1880s and in Britain after 1908." Gilbert (1966) argued that the Victorian ethics of self-reliance and *laissez-faire* were important impediments to the introduction of old age pensions and health insurance in England in the last quarter of the nineteenth century that were overcome by World War I. See Numbers (1978, p. 60) and Hoffman (2001, Chapter 6) for a discussion of the divided views of organized labor in the United States. Rodgers (1998, p. 258) argues that mixed and ambivalent attitudes towards compulsory social insurance on the part of organized labor was not unique to the United States.

4. An empirical appraisal of the AALL case: a comparison of CHI and voluntary contracts for wage-workers

Scholarly interpretations of the failure of the AALL health insurance movement side with the AALL view that CHI would have resulted in a meaningful extension of health-insurance coverage because of its lower cost for wage-workers than the available voluntary contracts. To assess if CHI stood to be welfare enhancing for American wage-workers, I compare the costs and expected benefits of two contracts: the one defined in the AALL's proposed CHI act, and the other the sickness-insurance arrangement of the Independent Order of Odd Fellows (IOOF). I interpret the IOOF sickness-insurance contract as representative of the insurance available to American wage-workers. The IOOF was the largest sickness insurer in the United States until 1927 (Emery and Emery 1999; Emery 2006). The structure and operations of the IOOF's sickness-insurance arrangements were similar to those of other fraternal societies, unions and workplace based funds.[27]

The AALL's (1916) draft of an act for state health insurance required compulsory participation in the insurance program of all manual workers and other employees (mostly expected to be clerks and foremen) earning less than $1200 per year.[28] The proposed insurance benefits provided by CHI appeared to be generous and extensive. The draft act called for cash benefits equal to 2/3 of weekly wages that were to be paid commencing with the 4th day of disability to a maximum of 26 weeks in a 12 month period. For the insured worker and his family, CHI would pay for medical, surgical, and nursing attendance, medicines and surgical supplies.[29] The AALL plan also provided for maternity benefits for insured women and wives of insured men and a $50 funeral benefit to be paid to the survivors of insured workers. Finally, the draft act called for an extension of coverage for individuals whose contributions ceased on account of unemployment not due to sickness. In these cases, the insurance was to remain in force for 1 week for each 4 weeks of paid up contributions in the previous 26 weeks.

The cost of the insurance for the employed individual was unclear. The AALL expected the cost of CHI coverage to be between 1.6% and 4% of a wage-worker's annual income, depending on how much of the cost could be shifted onto employers and the State.[30] The AALL's belief that sharing the cost of insurance across the insured employee, the employer and the state would encourage the prevention of illness resulted in the proposal that the employee and employer would each pay 40% of the insurance cost, and the state would pay the remaining 20%.[31] Assuming that the employer's share of the cost would not be passed on to the employee through wage reductions (or lower wage increases), under the AALL proposal the insured worker would pay only 1.6% of annual income for CHI coverage.

Further evaluation of the AALL's proposed CHI program requires comparison to the voluntary contracts that were available to wage earners. To make this comparison, I consider the cost of voluntary insurance as provided through the IOOF. From Emery and Emery's (1999) detailed examination of the IOOF sickness benefit arrangement, an IOOF member was eligible for a cash-sickness benefit of typically $3 to $5 per week of disability beginning with the 8th day of disability and lasting until the 52nd week of sickness, after which time the amount of the benefit was reduced to $1 per week. Lodge brothers provided "attentive benefits" to aid the afflicted Odd Fellow but also presumably to ensure the legitimacy of the benefit claim. IOOF subordinate lodge memberships could choose to contract with a physician to provide medical attendance and medicines for lodge members. Like the proposed CHI arrangement, the IOOF offered members a funeral benefit of $30 to $100 (depending on the jurisdiction/state). While the IOOF did not provide maternity benefits, it did provide widows and orphans benefits that were not included in the proposed CHI act. Beyond these stipulated benefits, all lodges could choose to pay higher amounts of cash relief to brothers in need, or to pay for med-

[27] See Emery and Emery (1999, pp. 86–98), Murray (2007). The differences in contracts were primarily found in the values of the weekly cash sickness benefit and annual dues, the length of initial wait period to collect benefits, and the length of time that full cash benefits could be collected. For example, friendly societies and workplace based sickness insurers charged similar annual dues for membership, but the workplace based arrangements paid a weekly cash benefits as much as double that of the friendly societies (See Emery and Emery, 1999; Murray, 2007, Chapter 5, Table 5.1). The workplace based arrangements typically paid benefits for shorter durations such as 13 weeks, while fraternal sickness insurers paid their lower weekly cash benefit for up to 52 weeks in many cases. The friendly society contract was more prevalent than the work place based contract The IOOF had a peak membership of 1.9 million members in 1921 workplace based arrangements may have covered as many as 800,000 members in the 1920s (See Emery and Emery, 1999, pp. 3, 92–95). See Murray (2007, Chapter 4).

[28] Other persons could join the insurance scheme on a voluntary basis, including self employed persons with earnings of less than $1200 per year.

[29] It is not clear that the CHI benefit would have been as generous as the AALL proposed. Numbers (1978, p. 81) notes that a 1918 New York CHI Bill limited cash benefits to $8 per week of sickness. While the AALL draft bill stipulated coverage for medical costs, it is not obvious that CHI legislation would have included paying for medical care if it were to be adopted. Physicians would have supported CHI if it had not included coverage for their services. The 1917 final report of the California Social Insurance Commission recommended CHI for the state but that cash and medical benefits have separate administration (Numbers, 1978, pp. 72, 79). The 1916 Mills Bill for CHI in New York did not include medical care for families of insured persons or maternity benefits (Numbers, 1978, p. 37).

[30] Chamberlain (1914), Fisher (1917). Based on German experience, the AALL suggested that a premium of 4% of wages was needed to finance the benefits (Lubove, 1968, p. 71). The Illinois Social Insurance Commission estimated that the payroll costs would be as high as 7.5% (Starr, 1982, p. 254). Murray (2007, p. 27) suggests a range for payroll costs for CHI of 2.5–5% of wages.

[31] AALL draft legislation also detailed a sliding scale where the employer paid from 80% of the insurance costs for the lowest wage workers to 40% for workers with higher wages. AALL (1916, pp. 250–255). In compulsory sickness insurance funds in Europe, employees contributed one-half to two-thirds of the funds with employer contributions making up the balance (Murray, 2003, p. 229). In England, employees paid 7/9 of the costs of their benefits, and the state paid 2/9 (Gilbert, 1966, pp. 354–355).

Table 1
Sickness Experience from IOOF Ontario Data for 1896, 1897 and 1898.

	Log (claim rate)	Log (weeks sick)
Age	0.0019 (0.011)	−0.00013 (0.0085)
Age-squared	0.00035* (0.0001)	0.00025* (0.000093)
Constant	−2.675 (0.228)	1.114* (0.18)
R-squared	0.79	0.72
n	150	150

Notes: Models are estimated by OLS using data for single years of age for ages 21–70 for the years 1896, 1897 and 1898. The dependent variables are the logarithm of the number of Ontario Odd Fellows of a given age in receipt of cash benefits divided by the number of members in good standing at that age, and the logarithm of total weeks of sickness benefits paid for members of a given age, divided by the number of members at that age in receipt of cash benefits. Year dummies were included in each of the estimations. The Tables with the data are published in the IOOF Grand Lodge of Ontario *Journal of Proceedings* for 1897, 1898 and 1898. Standard Errors are in parentheses and * indicates significant at size 0.05.

ical attendance on a discretionary basis. In friendly societies like the IOOF the cost of this sickness insurance coverage was $6 to $10 per year.[32] Further, the levels of coverage for the sickness and funeral benefit could be almost doubled by joining an auxiliary branch of the organization for a similar cost.[33]

The AALL's proposed CHI legislation would have cost wage-workers more than the existing voluntary insurance arrangements but it also provided more generous benefits in the event of sickness. For a wage-earner with average annual earnings of around $600 at the time of the AALL's draft act, the $6 to $10 annual cost of IOOF sickness insurance (1–1.5% of annual earnings) secured a cash benefit of $3 to $5 per week of sickness.[34] Assuming a CHI premium of 1.6–4% of earnings, if the cash benefit paid while sick was 2/3 of the weekly wage as proposed by the AALL, then for $600 annual earnings, $10 to $24 per year would have secured a benefit of $8 per week of sickness.

Further comparison of the draft CHI act and voluntary insurance arrangements requires some description of the risk of illness for a wage-earner to determine the size of the expected income loss and the size of the expected insurance benefit. For this purpose, I use data compiled by the IOOF Grand Lodge of Ontario between 1896 and 1898 on the sickness benefit claims experience of Odd Fellows by single years of age from the semi-annual returns of IOOF subordinate lodges.[35] Although IOOF claims statistics understate the incidence of sickness (members in arrears for dues being ineligible for claims), the data provide a hypothetical morbidity model that serves for comparison of the CHI and Odd Fellows contracts.[36] I focus the evaluation on the value of cash benefits under the two plans since income loss due to an inability to work was the important cost of illness at this time. Also, as noted earlier, while the AALL draft bill stipulated coverage for medical costs, it is not obvious that CHI legislation would have included paying for medical care if it were to be adopted.[37] Following the evaluation of the expected benefits of the two contracts, I consider whether the contracts differed in the extent to which they would have covered infrequent, large losses due to long duration spells of illness.

Table 1 presents estimated coefficients for equations that describe the risk of falling sick for at least 1 week, and on the number of weeks of sickness conditional on being sick for at least 1 week, as a function of age and age-squared. Table 2 pre-

[32] Emery and Emery (1999). The IOOF levied one time joining fees of $10 to $12 as well. Nominal values of dues and benefits paid did not typically change over time so in constant purchasing power terms, the value of these benefits was falling over time.

[33] Emery and Emery (1999, p. 53). Individuals could also choose to belong to more than one organization.

[34] For discussions of typical incomes levels for this period, see Rubinow (1913a,b), Chamberlain (1914) and Murray (2007, pp. 149–150). Rubinow (1913a, p. 32) reported that 90% of males living east of the Rockies and north of the Mason Dixon line earned less than $800 a year. The proposed income ceiling for CHI coverage was $1200.

[35] The semi-annual returns listed the names, ages, and the duration and dollar value of sickness benefits paid to lodge brothers who were sick and unable to work. The Tables presented by the IOOF Grand Lodge in Ontario aggregated these statistics by age across all of the subordinate lodges in the province. While the Ontario Grand Lodge of the IOOF compiled and reported these statistics, other Grand Lodge jurisdictions investigated by Emery and Emery (1999) did not. As such, I am not certain if similar tables are reported in Grand Lodge Proceedings in other U.S. states. The Ontario IOOF claims data for 1896 to 1898 suggests that the Ontario Odd Fellows had sickness claims rates and durations consistent with the average experience for all North American IOOF Grand Lodge Jurisdictions for the period 1902–25 in Emery (2006, Table 2).

[36] For discussions of the interpretation of benefit claims data as morbidity data see Riley (1997), Emery and Emery (1999) and Murray (2003). Armstrong (1932, pp. 295–296) argues that statistics from organizations like the IOOF understate the incidence and duration of sickness since they include illness lasting 8 days or more, and they tend to represent the experience of members selected on the basis of age and good health. On this latter point, see Murray (2003). Actuarial calculations for the 1911 NHI in England were based on IOOF Manchester Unity sickness claims experience for 1893–97. The IOOFMU was the largest British Friendly Society with a national membership that was thought to be representative of the population to be insured under the NHI. Because the IOOFMU selected its members rigorously while NHI would not, actuaries in England in 1910 estimated that the incidence of compensated sickness under the NHI would be 10% above IOOFMU experience (Gilbert 1966, p. 384).

[37] The CHI arrangement on the surface may appear to provide more than the IOOF contract in terms of insurance coverage but in practice, this may not have been the case since the IOOF provided many forms of relief on a discretionary basis, and where CHI had maternity benefits, the IOOF had widows' and orphans' benefits. Finally, the lower premium cost for the IOOF coverage relative to the CHI contract meant that households would have had more income under the voluntary arrangement to pay for medical attendance and medicines.

Table 2
Expected incidence of compensated sickness and expected duration of compensated sickness by age group from IOOF Ontario Grand Lodge data.

Age	Expected claim rate	Expected claim duration (weeks)	Expected sickness duration (weeks)
	(1)	(2)	(3)
Over 20	0.15	5.72	0.88
20–24	0.09	3.91	0.33
25–29	0.09	4.15	0.39
30–34	0.11	4.47	0.47
35–39	0.12	4.86	0.58
40–44	0.14	5.36	0.75
45–49	0.17	5.98	0.99
50–54	0.20	6.76	1.34
55–59	0.24	7.73	1.88
60+	0.30	8.96	2.72

Notes: The expected claim rate and duration are the exponentials of the fitted values generated by the estimated equations in Table 1. For the age group reported, the fitted value reflects the mid-point of the age-range. For the over-20 category, the fitted values are for an age of 45, and for 60+, an age of 62. The expected sickness duration in column (3) is the product of columns (1) and (2).

Table 3
Expected contributions and cash benefits of compulsory and voluntary health insurance plans.

Age	Sickness duration (weeks)	Annual earnings	CHI contributions			IOOF dues	AALL CHI cash benefits			IOOF cash benefits
			High 4%	Low 1.6%	3%	Flat fee	2/3 weekly wage	1/2 weekly wage	$8/ week	$3/week
Over 20	0.88	$600	$24	$10	$18	$6	$8.17	$6.13	$8.17	$2.64
Over 20	0.88	$1200	$48	$19	$36	$6	$16.34	$12.26	$8.17	$2.64
20–24	0.33	$600	$24	$10	$18	$6	$3.79	$2.84	$3.79	$1.00
25–29	0.39	$600	$24	$10	$18	$6	$4.24	$3.18	$4.24	$1.17
30–34	0.47	$600	$24	$10	$18	$6	$4.89	$3.67	$4.89	$1.41
35–39	0.58	$600	$24	$10	$18	$6	$5.80	$4.35	$5.80	$1.75
40–44	0.75	$600	$24	$10	$18	$6	$7.11	$5.33	$7.11	$2.25
45–49	0.99	$600	$24	$10	$18	$6	$9.03	$6.77	$9.03	$2.96
50–54	1.34	$600	$24	$10	$18	$6	$11.87	$8.90	$11.87	$4.03
55–59	1.88	$600	$24	$10	$18	$6	$16.19	$12.14	$16.19	$5.65
60+	2.72	$600	$24	$10	$18	$6	$22.89	$17.16	$22.89	$8.16

Notes: Sickness duration is the expected sickness duration from Table 2. Three CHI contribution rates are used. 4% assumes that the wage-earner paid the full proposed cost while 1.6% assumes that the AALL plan of wage-earners paying only 40% of the insurance cost was in place. The 3% of income contribution rate is my estimate of the cost of the CHI program with the medical benefits removed which makes the CHI and IOOF contracts more comparable. For the British National Health Insurance planning, it was estimated that the cost of providing medical benefits would account for 20–25% of the total insurance cost (Gilbert, 1966, p. 349). For the expected value of cash benefits, I multiply the expected sickness duration by the value of the weekly cash-sickness benefit for the IOOF benefit, and the expected sickness duration plus 0.14 weeks (1 day) times the value of the weekly cash benefit for the CHI contract. The weekly wage that I use is annual income divided by 52. I also use $8 per week which was proposed as part of 1918 Bill in New York (Numbers, 1978, p. 81).

sents the expected frequency of compensated sickness and the expected duration of compensated sickness by age group generated with the estimated coefficients in Table 1. Over the ages of 20–70, these data suggest that an insured male could expect to experience 0.88 weeks (6.5 days) of compensated sickness per year.[38] The probability of sickness lasting at least 1 week was 0.15 per year and conditional on being sick for at least 1 week, an Odd Fellow received cash-sickness benefits for an average of 5.72 weeks. The incidence and duration of sickness related disability increased with age. A 20–24 year old male had a probability of 0.09 of being sick for at least 1 week, 3.9 weeks of compensated sickness if they fell sick for a week, and an expected duration of compensated illness of only 2.5 days. By age 40, the expected duration of compensated illness had increased to 5 days and the risk of falling ill to 0.14, and by age 60, 20 days of expected sickness compensation and a probability of sickness of 0.3.

The IOOF paid sick benefits starting with the 8th day of disability to at least the end of the 52nd week. CHI proposed to pay starting with the 4th day of disability through to the end of the 26th week. To compare the expected sick benefits payable under the two contracts some consideration needs to be given the differences in claims periods. In particular, the CHI contract would have been more generous than the IOOF contract in two ways. First, for men disabled at least 7 days, they would have received cash benefits under CHI for the 4th through 7th days, or an additional half a week. Second, some proportion of men would have been ill and away from work for 4–7 days resulting in some number of men receiving cash ben-

[38] Armstrong (1932, pp. 284–296) reported a range of estimates for work days lost due to sickness of 6–9 per worker for the period 1915–30. In 1916 the U.S. Public Health Service estimated that a worker missed an average of nine working days per year due to sickness (Hoffman, 2001, p. 7).

Table 4
Ratios of expected benefits to premium costs for compulsory and voluntary health insurance.

Age	Annual income		IOOF	CHI		
		Cash benefit	$3/wk	2/3 of weekly wage		
		Cost	$5/year	4%	1.6%	3%
Over 20	$600		0.44	0.34	0.85	0.45
Over 20	$1200		0.44	0.34	0.85	0.45
20–24	$600		0.17	0.16	0.39	0.21
25–29	$600		0.20	0.18	0.44	0.24
30–34	$600		0.24	0.20	0.51	0.27
35–39	$600		0.29	0.24	0.60	0.32
40–44	$600		0.37	0.30	0.74	0.40
45–49	$600		0.49	0.38	0.94	0.50
50–54	$600		0.67	0.49	1.24	0.66
55–59	$600		0.94	0.67	1.69	0.90
60+	$600		1.36	0.95	2.38	1.27

Notes: The values in this table divide the expected cash benefits by the dollar contributions paid according to Table 3. The higher the number, the more benefit expected per dollar of contribution.

efits for up to one half of a week. On the other hand, the shorter maximum payment period under CHI would have reduced the expected length of cash benefit receipt compared to the IOOF contract. Since my interest is in comparing the CHI contract to the IOOF contract, I am going to make assumptions about the claims distribution that are favorable to the CHI contract. In the calculations below, I assume that the probability of experiencing a sickness related workplace absence of 4–7 days is 15% and the probability of experiencing a work absence spell greater than 26 weeks is 0%.[39] Based on these assumptions, the CHI contract would have increased the expected length of compensated claim from 6 days with the IOOF contract to 7 days. In Tables 3 and 4, I estimate the CHI expected claim length to have been 1 day (0.14 weeks) longer than the expected claim length under the IOOF contract.[40]

Table 3 uses the sickness experience described in Table 2 to compare the generosity of the cash benefits in the AALL's proposed CHI act with the IOOF's voluntary arrangement. With the AALL's proposed CHI arrangement, a $600 earner could expect to receive $8.17 in cash benefits per year, and an earner at the $1200 ceiling for compulsory coverage could expect a benefit of $16.34 per year. With the IOOF cash benefits of $3 to $5 per week of sickness, expected cash benefits were $2.64 per year for both income levels.

From the age specific calculations in Table 3, we can see that the advantage of CHI over the IOOF arrangement with respect to cash benefits was at higher ages with longer expected claims durations. For men under age 30 earning $600 per year, the difference between the expected benefits under the two schemes was around $3 compared to a difference in contribution amounts of $4 to $18. Consider as well that the IOOF members could effectively double the size of their cash benefit by joining the organization's auxiliary branch for roughly the same cost as the IOOF membership (Emery and Emery, 1999). For $600 earners under age 35, this means that the voluntary arrangement could provide as much as 60% of the expected CHI benefit coverage for around $12 per year, or half of the cost of the CHI if the employee had had to pay the full cost of their insurance.

Table 4 compares the size of the annual expected sickness benefits to the annual contributions that were to be paid. The IOOF contract resulted in 44 cents of expected benefit for each dollar of contribution, while the CHI contract would have provided 34 cents of expected benefit for each dollar of contribution if wage-workers paid the full cost and if benefits were set to replace 2/3 of the wage. This comparison may be too unfavorable to CHI, however, as the CHI arrangement was set to collect 4% of a wage-worker's income but that was to pay for medical treatment as well as cash and other benefits while the IOOF contract provided cash and other benefits. The most comparable situation for assessing insurance cost would thus net out

[39] Bachman and Meriam (1948, p. 140) report days of disability for 1928–31 that were compiled from the 1933 Committee on the Costs of Medical Care. These statistics include information on the percentage of individuals with no spell of disability (0 days). These statistics suggest that the probability of experiencing a disability spell of 4–7 days was 13%. At the same time, the Bachman and Meriam (1948, p. 140) statistics suggest that the probability of experiencing a spell 8 days or more in length was 24% which is much higher than the estimates from the IOOF claims data. Alter and Riley (1989, Table 1) report duration of workplace absences from two companies in Boston for 1922–24. The difficulty with the Alter and Riley numbers is that their distribution does not include the count of individuals with no sickness spell. If the disability spells reported by Alter and Riley (1989, Table 1) are only half of the total spells with 0 days included as they are in the Bachman and Meriam (1948) table, then the probability of being sick for 4–7 days would only be 8.5%. From Alter and Riley's table, 15% of disability spells in the firm paying wages from the first day lasted 8 days or more, but if the spells lasting 0 days are 50%, then this frequency of spells lasting longer than 7 days is closer to 7.5% which is lower than the IOOF claims data. Assessing the likelihood of a sickness spell that lasted longer than 26 weeks is not as straightforward since most studies limited the attention to shorter duration spells. In part this reflects that the frequency of longer disability spells was low. Bachman and Meriam's (1948, p. 140) statistics suggest that around 2.5% of disability spells lasted at least 76 days (11 weeks). As noted above, Alter and Riley (1989, Table 1) show that only 4.5–9% (depending on the size of the unreported 0 day durations frequency) of disability related work absences lasted 12 days or more.

[40] If the probability of a 4–7 day sickness spell was 0.15 for all age groups, then the additional length of an expected compensated sickness was 0.8 days for a 20 year old and 1.6 days for a 60 year old. If the probability of a spell lasting 4–7 days was 0.3, then the compensated spell of sickness for all ages would be 1.5 days longer than the IOOF's compensated sickness spell.

the share of the insurance cost that was to pay for medical benefits. According to Gilbert (1966, p. 349), actuaries involved in the British National Health Insurance planning estimated that the cost of providing medical benefits would account for 20–25% of the total insurance cost. At a 3% CHI premium, each dollar of contribution would yield 45 cents of expected benefit. This suggests that a premium of 4% of annual income to be entirely paid by the insured individual may have been too high to make CHI an attractive alternative to the available voluntary insurance contracts. Only with the subsidized premium proposed by the AALL would the CHI insurance cost have been lower cost than the IOOF contract for wage-workers.

Tables 3 and 4 show that relative to the voluntary contract that was available, the AALL's proposed CHI contract should have appealed more to older men than to younger men, and for higher income earners than lower income earners. The principle advantage of the CHI contract over the voluntary IOOF contract was to increase the level of benefits as incomes and expected sickness duration increased. On the other hand, Table 4 shows that the flat price of the IOOF contract resulted in a lower price of benefits for men as the expected duration of sickness increased. In addition, despite its more generous cash benefits, CHI did not necessarily address the insurance needs of older working Americans. CHI primarily insured acute illness with short spells of disability. With increasing age, the risk of illness shifts from that of acute illness to chronic illness which was not going to be adequately insured under the draft act.[41] The voluntary contract as provided by the IOOF would have been more suited to insuring chronic illness than the AALL's proposed plan since cash benefits continued for 52 weeks and beyond.[42]

Despite the AALL reformers' concerns for the lower earning wage earners who they believed could not afford to purchase voluntary insurance coverage, the preceding comparison demonstrates that that the AALL's proposed CHI contract did not offer any cost advantages over what was available through voluntary arrangements in the absence of a substantial subsidy. This suggests that the compulsion aspect of the government insurance arrangement may have been an important feature of social insurance. Rodgers (1998, p. 243) describes how some proponents of compulsory health insurance in the United States viewed social insurance like CHI as nothing more than a complicated scheme for compulsory savings. The main purpose of CHI would have been to compel wage-workers to purchase higher levels of insurance coverage. Whether or not compulsory savings would have been a benefit to households would depend on whether it was the case that they were otherwise unable to meet the expected costs of sickness.

5. Savings rates and the need for CHI in the U.S.

Was it true that American wage-workers' incomes were insufficient for households to save, or to allow households to purchase sickness/health insurance through voluntary arrangements as the AALL reformers alleged?[43] To answer this question, I use income and expenditure data from the U.S. Commissioner of Labor Survey of the Cost of Living of industrial workers in the United States and Europe for 1888–1890 and from the 1917–19 Bureau of Labor Statistics Cost of Living Survey.[44] The surveys are not random samples of American wage earners but for my purpose of evaluating the need for CHI in the U.S., these samples are useful since the wage-workers included in the survey were representative of the workers targeted for the AALL for the compulsory health insurance arrangements.[45] Despite the over-representation of higher earning industrial households in these data, the data are useful for addressing the claims of the AALL reformers. For the 1888–90 sample, I calculate that only 22% of American households in this sample had incomes high enough to meet Rubinow's "minimum level of decency" in standard of living.[46]

As compulsory health insurance would have primarily covered male household heads, I consider the size of the household surplus (total income minus total expenditures) relative to the husband's income to measure a savings rate that would be comparable to the percentage of earnings that would have been deducted for CHI coverage. For 1888–90, I have information on earnings of household members, expenditures on food, rental costs, home and utilities, taxes, insurance, charity, vices and sickness and death. For 1917–19, I have information on earnings by household members, expenditures on food, clothing,

[41] Bachman and Meriam (1948, pp. 256, 260) show that for the U.S. in 1940, number of days of disability per person per year from acute illness was 2.5 versus 7.3 for chronic illness. The frequency of cases of chronic illness in the population increased with age as did the associated days of disability per year person, rising from 3.1 days for persons under the age of 25 and rising to 33.4 days for persons over age 65. The frequency of acute illness and associated days of disability did not show similar increases. Days of disability associated with acute illness increased from 2.3 per person under age 25 to 2.7 for persons aged over 65.

[42] England's NHI included a disability benefit that was paid for an indefinite period beyond the 26th week of sickness. The value of the disability benefit was 5s per week compared to the 10s paid per week for the first 26 weeks of sickness (Gilbert, 1966).

[43] See Rubinow (1913a,b, 1934), Epstein (1933), Hoffman (2001), Murray (2007, pp. 145–151).

[44] The 1888–90 survey data are described in detail in Haines (1979), Gratton and Rotondo (1991) and Horrell and Oxley (2000). The survey gathered data on the demographic characteristics, occupations, incomes and expenditures of 8544 families in 24 U.S. states who earned income from working in nine protected industries. Wage-workers in cotton textile and iron and steel industries dominate the total number of observations, as do male-headed households (Haines, 1979). See Gratton and Rotondo (1991), Kantor and Fishback (1996) and Moehling (2005) for discussions of the 1917–19 data.

[45] Haines (1979, p. 294) suggests that 1888–90 survey is a representative sample of industrial wage-workers. Gratton and Rotondo (1991, p. 342) suggest that the 1888–90 survey's inclusion of high wage industries made the sample of households potentially more affluent than the wage-earning population but the survey should be useful representing the conditions of blue collar workers in an industrializing economy.

[46] Rubinow (1913a, p. 32) assessed that only 10% of males living east of the Rockies and north of the Mason Dixon line could meet this standard. The difference between the 1888–90 sample and Rubinow's assessment of household financial positions of males may not only reflect the affluence of the 1888–90 sample relative to the general wage-earning population. Where the general statistical pattern was believed to have shown dramatic increases in wages between 1866 and 1900, Rubinow (1913a, pp. 34–37) demonstrated that real weekly earnings were not rising between 1890 to 1907 because of falling hours of work and rising food costs.

housing rent, fuel and light, furniture, insurance, liquor and tobacco, medical expenses, cemetery expenses and "miscellaneous".[47] I focus on median values of savings rates since the distribution of household surpluses is skewed in favor of high incomes resulting in high mean values for incomes and savings.

Table 5 shows the median savings rates for U.S. households by age-group of the household head in 1888–90 and 1917–19 compared to the expected income replacement with CHI. The median savings rates for 1888–90 for males under age 40 were below 2.5% while for males over age 40, savings rates increased to over 5% and reached almost 10% for households with heads aged in their 50s. Despite the low savings rate for males under 40, the majority of households had surpluses that exceeded the expected compensation for income loss from sickness from CHI suggesting that households could have met these costs out of current savings. As the size of the expected loss increased with age, so did the savings capacity of American households. This increase in savings capacity over the life-cycle would have weakened demand for CHI. As shown earlier, CHI benefits were more generous for older men than younger men relative to the voluntary insurance contract, but the evidence here suggests that young men with lower savings would have had greater need for insurance.

It is important to recognize that American households in the 1888–90 sample were generating budget surpluses after incurring expenses related to sickness. For the entire sample, the median expenditure reported for the survey category "sickness and death" for the U.S. was $12, or 2.7% of the median household head's income ($448). The median surplus for the entire sample was 2.2% of the median household head's income. If we consider these expenditures as those which would be covered under CHI, then the median size of household surplus and expenditures on sickness and death represented almost 5% of the husband's income in 1888–90. Interestingly, the AALL presented similar estimates to show that CHI would not increase an employee's financial burden. Chamberlain (1914, pp. 64–65) reported studies that showed that households in New York with family incomes between $600 and $1100 spent 4% of their incomes on insurance and services that would be covered by proposed CHI legislation.

According to the reformers, conditions of working Americans got worse, not better, after 1890.[48] In the minds of the reformers, a growing American economy was not going to solve the problems of the working class and eliminate the need for social insurance. Table 5 shows that the reformers were wrong. Estimates of household savings rates for 1917–19 for males under age 40 had increased substantially from the estimates for 1888–90. Even by the standards of the reformers, the condition of wage-workers' households had improved as these higher savings rates were accomplished with less reliance on income from working children.[49] Some of this improvement reflects that the larger number of states in the 1917–19 survey included the prosperous western states. Table 5 also shows the savings rates calculated using data only for the states that were included in the 1888–90 survey. Amongst this smaller set of states, savings rates are lower than for the all states sample, but they are still high enough to suggest that households had the necessary surplus to purchase voluntary insurance contracts or meet the expected annual sickness cost. As Weaver (1983) has argued for Old Age Insurance, the need for CHI was falling between 1889 and 1920. The same forces of economic growth behind those developments were also at work with compulsory health insurance.

While households may have had annual surpluses large enough to meet the expected costs of sickness, CHI could have improved their ability to meet infrequent, but large, sickness costs.[50] In this case, the annual savings rate is less informative than measures of a household's wealth. A reserve equal to 33% of annual income was equivalent to the maximum cash benefits that the AALL's proposed CHI act would have provided. Rubinow (1934) assessed that the numbers of savings and other time deposit accounts suggested that over 40% of the population had accumulated savings and the average account size was $500. Rubinow argued that Epstein's (1933, pp. 110–112) "careful statistical work" showed that as the bulk of the value of aggregate savings in the U.S. was not of "workingmen" but of the "middle class". Thus, a better estimate of the average size of account for the workingman who did save was under $200. With annual incomes for the late 1920s of $1200 reported by Epstein (1933, 100), these estimates of aggregate savings would represent a reserve equal to 14–33% of average income. It is possible that CHI's coverage for "catastrophic costs" represented an improvement over what workers had through voluntary arrangements but it is also important to recognize that savings deposits are only one possible savings vehicle. Without knowing how much other wealth was accumulated by workingmen in the form of equity in the home or consumer durables like furniture, one can only guess that the reformers' case was pessimistic.

Compulsory savings through a scheme like CHI had the potential to reduce the standard of living for wage earners in the U.S. At best, as Costa (1995) suggests, CHI was an expensive substitute for what workers already had but CHI was not a perfect substitute for voluntary insurance or self-insurance through savings. Even if Chamberlain (1914) was correct in assessing that CHI would have cost households no more than they were spending on sickness already, the compulsory requirement

[47] Mortgage payments are not reported in the 1888–90 data so household expenditures of home owners are downward biased which will increase the surplus measure (Gratton and Rotondo, 1991). To determine the potential size of the bias for the 1888–90 surplus measure, surpluses for 1917–19 are calculated with and without mortgage expenses. These calculations suggest that the median surplus of household heads in 1888–90 would be 1% point lower if mortgage payments were to be included.

[48] Where the general statistical pattern was believed to have shown dramatic increases in wages between 1866 and 1900, Rubinow (1913a, pp. 34–37) presented indices showing that real weekly earnings were not rising between 1890 to 1907 because of falling hours of work and rising food costs. Epstein (1933, p. 102) concluded that even in the prosperous 1920s "only very few of our workers have earned enough to maintain for themselves and their families a decent American standard of living... They have rarely been able to meet fully the day-by-day expenses of decent living, let alone laying aside any savings against rainy days."

[49] See Gratton (1996) for a discussion of these developments in the United States.

[50] For large losses that occur infrequently, market insurance may be the preferred arrangement over self-insurance depending on the cost of the coverage (Ehrlich and Becker, 1972).

Table 5
Median savings rates for U.S. households, 1888–90 and 1917–19.

		Zero surpluses included					Zero surpluses excluded			With mortgage expenses, zero surpluses excluded			
				Without mortgage expenses	With mortgage, expenses		Without mortgage expenses	With mortgage expenses		1917–19	1917–19	1917–19	1917–19
	Expected income replacement with CHI	1888–90	*n*	1917–19	1917–19	*n*	1917–19	1917–19	*n*	1888–90 states Only	Commission states	NYC	NY
20–24	0.9%	0.8%	290	3.9%	3.3%	474	5.0%	4.6%	414	4.0%	3.6%	0.0%	1.3%
25–29	1.1%	2.8%	1002	4.6%	3.8%	2110	5.4%	4.6%	1907	3.9%	3.6%	2.0%	2.1%
30–34	1.2%	2.1%	1182	5.2%	4.1%	2841	5.9%	4.8%	2630	4.2%	4.5%	3.3%	3.8%
35–39	1.4%	2.7%	1144	5.1%	4.0%	2856	5.9%	4.8%	2604	3.8%	4.3%	1.0%	2.8%
40–44	1.8%	5.2%	985	5.6%	4.4%	2015	6.2%	5.1%	1865	4.0%	4.2%	1.0%	3.0%
45–49	2.3%	8.7%	798	6.1%	5.2%	1393	7.1%	6.0%	1286	5.8%	6.5%	1.8%	3.8%
50–54	3.0%	9.2%	557	8.5%	6.8%	653	9.5%	7.7%	613	8.8%	8.3%	4.9%	7.0%
55–59	4.0%	9.3%	336	7.6%	6.1%	274	9.2%	7.6%	247	8.2%	9.7%	7.5%	7.2%
60+	5.7%	10.4%	310	9.4%	8.4%	185	11.3%	9.4%	164	12.9%	18.3%	13.2%	15.1%

Notes: The expected income replacement from CHI is the sickness duration in weeks from Table 3 plus 0.14 weeks, divided by 50. The surplus measure is total household income less total expenditures reported. The surplus is divided by the husband's income to calculate the savings rate. The median savings rate was determined and reported in this Table. For 1917–19, the surplus measure was calculated with and without mortgage payments included in the total expenditures. The surplus measures were also calculated with, and without, households with 0 surplus included in the calculations. The reason for doing this is that the 0 surplus could indicate no savings or dis-savings, but also missing values. Commission states are the states identified by Lapp (1920); Massachusetts (1917 and 1918), California (1917 and 1919), New Jersey (1918), Ohio (1919) and New York (1919), Connecticut (1919), Wisconsin (1919), and Illinois (1919). NY is New York state and NYC is New York City.

of the state health insurance program could have left households worse off than under the existing voluntary arrangements. CHI would have locked Americans into saving for a single purpose for the length of their working lives. Based on the savings rate estimates in Table 5, a CHI premium of 4% would have eliminated most of the income surplus for households with heads under age 40.[51] The commitment of so much of household income to the insurance of a single risk was not necessarily desirable. Unlike CHI, the household's savings could be used for covering any losses of income due to illness, or unemployment.[52]

In contrast to CHI, voluntary insurance coverage for sickness may not have been an end in itself for risk mitigation, but instead, a means by which household self-reliance developed over the life-cycle.[53] Voluntary insurance arrangements for sickness risks were contingent claims forms of precautionary savings for which self-insurance through savings or accumulated wealth was a substitute. Over the life-cycle, the demand for precautionary savings for health insurance will be altered by two influences of aging. First, the increasing risk of sickness that accompanies aging will increase the demand for insurance. Second, the accumulation of wealth/reserves develops an individual's capacity for self-insurance as they age and accumulate wealth for consumption in retirement. Essentially, accumulation for life-cycle savings motives develops a household's capacity to insure as a by-product and provides a substitute for third party insurance. Whether the demand for third party insurance (from private or public sources) increases with age depends upon which of the two influences dominates.[54] Lee (2001) demonstrates that precautionary savings declined in importance for American households over the 20th century as life-cycle savings motives became more important along with the rise of modern retirement patterns. Lee argues that the accumulation of wealth by American households provided insurance through an annuitization of income.[55] As a contingent claim contract, CHI would have locked households into saving for a single purpose for the breadwinner's working life. In contrast to the lower cost, lower benefit voluntary contract that could be discontinued, the compulsory purchase of a generous insurance contract could have undermined the capacity of households to accumulate wealth over the life-cycle resulting in diminished consumption later in life.

So far I have presented evidence to support the argument that for many American households CHI would not have provided anything over what they had available from voluntary arrangements for meeting the sickness risk. If this observation is informative for explaining the political failure of the CHI movement in the United States, then variations in savings rates across U.S. states should be informative for explaining why some U.S. states pursued commissions, investigations and in some cases, legislation, toward the introduction of CHI while others showed no interest in the arrangement.

Eighteen U.S. states took some action toward investigating the need for, and the possibility of introducing, CHI. For 1917–19, I calculate median savings rate by age group for the subset of states that I could identify as having had a CHI Commission between 1915 and 1920. Table 5 shows that compared to the national sample, these Commission states had lower median savings rates for households headed by men under age 45, but higher savings rates for households with heads over age 45. This difference can explain why these states showed interest in CHI, but the levels of the savings rates in these states does not suggest strong need for CHI.

Anderson (1950, p. 370) assessed that a broad base of public support for CHI was lacking in the U.S., "except possibly in New York state". Jacobs (2002) describes the campaign for CHI in New York as the movement's "beachhead".[56] The push of legislation was strongest and the development towards the introduction of CHI was greater than in the other states and when the movement failed in New York, the movement failed for all states.[57] The question arises whether savings rates are useful for understanding why New York was the beach head. Table 5 shows savings rates by five-year age groups for New York State (including NYC) for 1917–19. Savings rates in New York State were lower than the average for the Commission states suggesting

[51] Kantor and Fishback (1996) find that the introduction of workers' compensation reduced household savings in 1917–19 by 25% due to the decreased income uncertainty and decreased wages. Fishback and Kantor (1992, 1995, 1998) discuss how workers paid for worker's compensation legislation through lower wages. Fishback and Kantor (1992) find that for the period 1884–1903 wage levels fully compensated for unemployment risk, partially compensated accident risk but did not compensate for occupational illness.

[52] According to Gilbert (1966, p. 164), English friendly societies opposed the introduction of contributory pension plans not because they competed with the friendly society benefits but because the contributory plan competed for the limited savings of the friendly societies' working class clientele. If the government plan forced the working man to divert his surplus savings into the government programme, the working man would no longer pay to belong to the friendly society.

[53] Emery and Emery (1999) argue that friendly society sickness insurance was primarily demanded by households lacking access to alternatives such as insurance within the family, or self-insurance through accumulated savings. Horrell and Oxley (2000) find that formal self-help such as voluntary insurance was a complement to, not a substitute for, risk mitigation strategies such as reducing household expenditures, or having multiple wage earners or by drawing on accumulated savings. Beito (2000, pp. 29–31) discusses the values of thrift, self-reliance and individualism that were advocated by fraternal orders. Individual self-reliance through accumulation was seen as achievable through cooperation and mutuality.

[54] Several studies seek to determine if self-insurance through savings was a substitute for voluntary insurance. Palumbo (2000) and Murray (2007) provide some evidence from cross-sectional survey data from the 1890s that self-insurance (savings) was a substitute for insurance purchases. Palumbo (2000) finds that members of labor unions had lower savings suggesting that insurance substituted for savings. On the other hand, Palumbo finds that membership in a benevolent society was positively correlated with savings suggesting that savings and insurance purchases were complements. Di Matteo and Emery (2002) find a negative correlation between the purchase of life insurance and the level of household wealth.

[55] From this perspective, the rise of compulsory state social insurance in Britain and Europe represents a response to an increase in the demand for precautionary savings in aging populations and an expansion and entrenchment of voluntary precautionary savings arrangements as exemplified by mutual aid organizations.

[56] Concerning the failure of the CHI movement in New York, Jacobs (2002) asks "why did no state enact a compulsory government health insurance program that could serve as a beachhead for further emulation by other states and the national government?"

[57] See Lubove (1968), Numbers (1978), Moss (1996), Beito (2000) and Hoffman (2001).

greater potential need for CHI than other states. At the same time, savings rates in New York State were high enough to meet the expected costs of sickness.

According to Hoffman (2001, pp. 68, 70–72) the CHI movement in New York had more support amongst urban doctors, particularly in New York City, while strong opposition to CHI was provided by the smaller county medical associations in the state. Was it the case of a demand for CHI in New York City but the not for the state overall?[58] The table shows that at the time that the AALL CHI movement was in full force, New York City evidenced low median savings rate for household heads aged 35–49. The savings were insufficient to meet the expected costs of sickness at the ages at which the expected income loss from sickness increased at a more rapid rate. This was not the case for the rest of New York state or for the U.S. overall so this does go some of the way to explaining the AALL targeting of New York and why the movement got as far as it did. The AALL had identified a population that potentially would have benefited from CHI but its miscalculation appears to have been from assuming that the economic condition of wage-workers in New York City was representative of wage-workers in other industrial states and cities.

6. Conclusions

The AALL reformers believed that their draft act defining a CHI program would have improved the welfare of wage earning Americans by providing affordable insurance coverage that existing voluntary arrangements had failed to provide. In addition, the reformers expected that through compulsion and subsidization, CHI would extend coverage to the lower wage earners. The evidence in this paper shows that CHI was not necessarily any less expensive than the coverage provided through voluntary arrangements and it would primarily have generated advantages for higher earning wage-workers. Estimates of savings rates show that American wage earners had the necessary budget surplus to meet expected sickness costs or to purchase voluntary insurance coverage, and counter to the claims of the reformers, savings capacities improved over time. In this early period, the costs of sickness were frequent but manageable for most wage-earners through voluntary insurance contracts and self-insurance. In all likelihood, CHI would have been welfare reducing for Americans as it added nothing over what was available through voluntary arrangements, and its cost would have taken all of a household's surplus income to meet the costs of a single income risk.

The rejection of CHI before 1930 should not be considered a policy failure. As Weaver (1983, pp. 295 and 300) argues, the need for social insurance in the U.S. must not have been strong and this is a logical explanation for the lack of political action towards the enactment of social insurance legislation. Continuing to perpetuate the view of institutional and ideological *American exceptionalism* limits our understanding of American social policy development. Rodgers (1998, p. 255) argues that social insurance was only one of many competing social policies that was being proposed in the north Atlantic economy by 1914 so concluding that the U.S. was a social policy failure because of its lack of compulsory-state-social insurance overlooks the abundance of social policy initiatives. Engel (2002) suggests that in the 1930s, while Americans did not seem particularly enthusiastic about compulsory health insurance, Americans were supportive of subsidies for medical care for poor Americans. As Thomasson (2002) and Beland and Hacker (2004) observe, the U.S. has used tax incentives to encourage the expansion private health insurance provided through the workplace and then to reserve public insurance coverage for the poor and the aged. This work also suggests that should the extent of health-insurance coverage fall in the U.S., or if the cost of voluntary coverage increases, Americans could support a move to national-health insurance.

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[58] Hoffman (2001, pp. 68–72) describes the doctors who supported CHI as urban and academic physicians interested in public health and working on salary. These physicians had concerns that the costs of medical treatment were too high for the poor and immigrant workers. Physicians opposing CHI in New York were most often from upstate and they were private practitioners working on a fee-for-service basis. Physicians on fee for service faced an income threat if CHI changed how physicians were to be paid.

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