Project Title

Telehealth Dietetic Services for In-Patient Pandemic & Surveillance Patients during COVID'19 Leads to Cost Savings and Reduction of COVID'19 Transmission Risk

Project Lead and Members

Project lead: Lim Xin Ru Jazlyn

Project members: Lim Ruey Jiun

Organisation(s) Involved

Ng Teng Fong General Hospital, Jurong Community Hospital

Healthcare Family Group(s) Involved in this Project

Allied Health

Applicable Specialty or Discipline

Dietetics and Nutrition

Project Period

Start date: Mar 2020

Completed date: Apr 2021

Aims

- To continue dietetic services remotely to surveillance and pandemic patients whilst saving 85% of costs from PPE, namely from reduction in use of N95, gown and surgical gloves from March 2020.
- To minimize contact and the risk of COVID’19 transmission without compromising patients care from March 2020.

Background

See poster appended / below

Methods

See poster appended / below

Results

See poster appended / below

Lessons Learnt

- Camaraderie within the department supported the adoption of telehealth
- People requires clear guidance and continual engagement to implement changes
- There is a need to create a telehealth workflow for outpatient settings to vary the provision of care for patients

Conclusion

See poster appended / below

Project Category

Technology, Digital Health, Telehealth, Care & Process Redesign, Value Based Care, Productivity, Cost Saving, Safe Care

Keywords

Surveillance, COVID-19, Transmission Risk, Remotely

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TELEHEALTH DIETETIC SERVICES FOR IN-PATIENT PANDEMIC & SURVEILLANCE PATIENTS DURING COVID'19 LEADS TO COST SAVINGS & REDUCTION OF COVID'19 TRANSMISSION RISK

☑ SAFETY
☐ QUALITY
☐ PATIENT EXPERIENCE
☐ PRODUCTIVITY
☑ COST

MEMBERS[1]: LIM XIN RU JAZLYN, LIM RUEY JIUN
1. DIETETICS AND NUTRITION

Define Problem, Set Aim

Problem/Opportunity for Improvement

The COVID'19 situation in Singapore has sparked discussions on how in-patient dietetic services can continue to be provided whilst managing tight resources on personal protection equipment (PPE) and minimising contacts to reduce the risk of local transmission without compromising patient care.

During the advent of COVID'19, there was a significant increase in PPE demand due to new infection control guidelines. The Dorscon Orange guideline required full PPE when providing care to patients in the pandemic and surveillance wards at the start of March 2020. Further to the problem was a tight control on PPE supply [1] . Moreover, the cost of PPE increased significantly during the time of a pandemic[1] .

The use of telehealth services as an alternative service delivery is promising in ensuring the continuity of dietetic services provision remotely to patients in the surveillance and pandemic wards, and reducing the reliance and cost on PPE[2] . This helps to maintain timely dietetics care while minimising the risk of COVID'19 transmission[3,4].

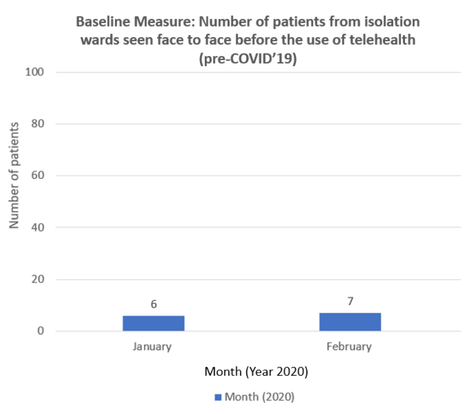
Noting an increase in COVID'19 patients in other Singapore hospitals, NTFGH dietetics department had prepared to provide care to patient from pandemic and surveillance wards. It was estimated that monthly cost projected with use of full PPE was $150 for NTFGH Dietetics department. This includes the assignment of one dietitian to provide dietetics services in person to an estimate of 80 patients in the pandemic and surveillance wards. The dietitian is required to comply to full PPE guidelines, which includes the use of one N95 mask daily, and one set of surgical gloves and a gown for each patient.

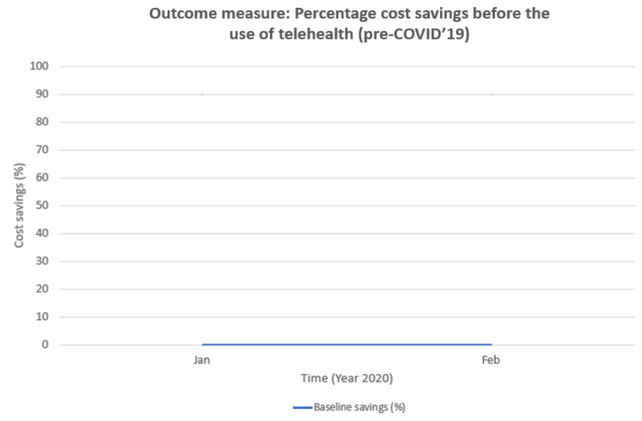
With the use of telehealth for surveillance and pandemic patients, total cost can be reduced to approximately $15 from the use of just surgical masks to provide face to face dietetics services to patients in general ward.

Aim

1. To continue dietetic services remotely to surveillance and pandemic patients whilst saving 85% of costs from PPE, namely from reduction in use of N95, gown and surgical gloves from March 2020.
2. To minimize contact and the risk of COVID'19 transmission without compromising patients care from March 2020.

Establish Measures

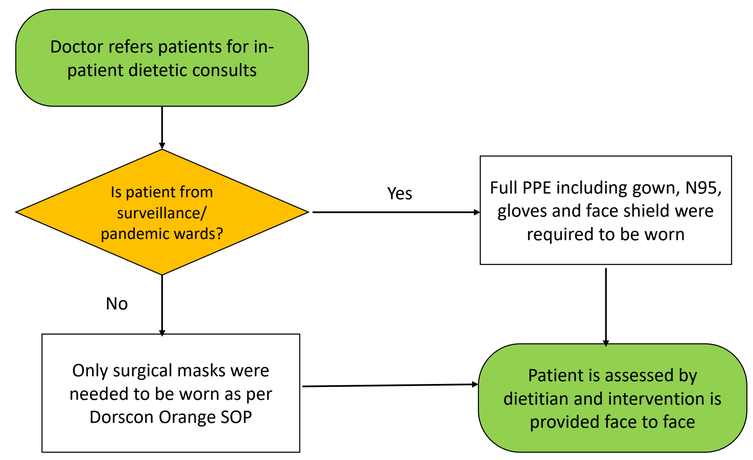




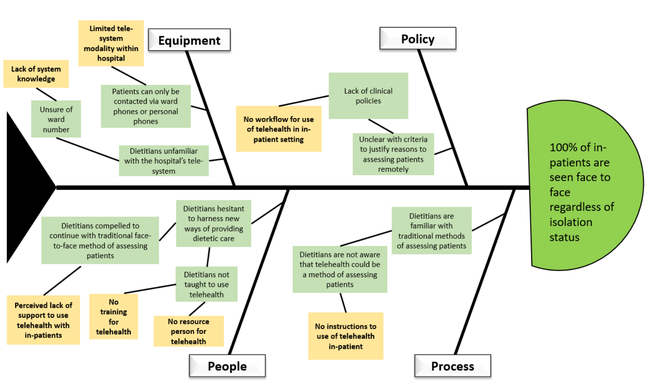
Note: The projected number of patients from surveillance and pandemic wards were expected to increase by 10x from pre-COVID data.

Analyse Problem

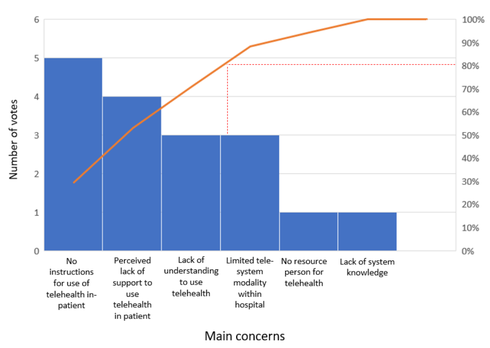
What is your process before interventions?



What are the probable root causes?



Root causes identified are illustrated in yellow boxes. Of the 7 root causes identified, 6 were narrowed down for a second round of voting as shown on the Pareto Chart



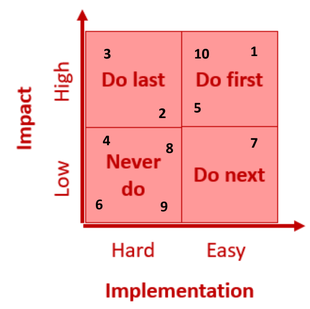
Reflecting on the 80/20 rule, approximately 80% of the root causes can be attributed to 4 factors in the Pareto chart above:
1. Having no instructions for use of telehealth in-patient
2. Perceived lack of support to use telehealth in-patient
3. Lack of understanding to use telehealth
4. Limited tele-system modality within hospital

Select Changes

Head of department (HoD) and dietitians will:

- *Define scope of practice for in-patient telehealth*
- *Facilitate continuous discussions with department on providing dietetic services remotely*
- *Ensure all surveillance and pandemic patients are seen remotely*

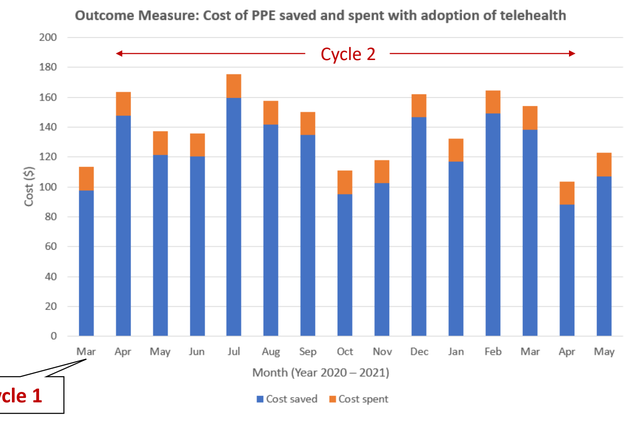
Root cause		Potential solutions
No instructions for use of telehealth in in-patient setting	1	HoD to provide instructions on dietetic in-patient telehealth to dietitians, defining the scope of practice
	2	Reference existing workflows from other institutions with the use of telehealth in the inpatient setting
	3	Obtain and implement best practices from researchs
Perceived lack of support to use telehealth with in-patients	4	Telehealth workflow as a means to substantiate and validate use of telehealth in the in-patient settings for surveillance patients
	5	HoD to spearhead the use of telehealth in-patient, encouraging the remote provision of dietetic services to all surveillance and pandemic patients
Lack of understanding to use of telehealth	6	Workflow to provide direction on conducting Dietetic assessment remotely
	7	Continuous discussions with department on conducting dietetic assessments remotely
	8	Formal training for use of telehealth in the in-patient settings
Limited tele-system modality within the hospital	9	Procuring of iPads to every pandemic and surveillance wards
	10	Utilising existing ward phones / patient phones to provide phone teleconsult

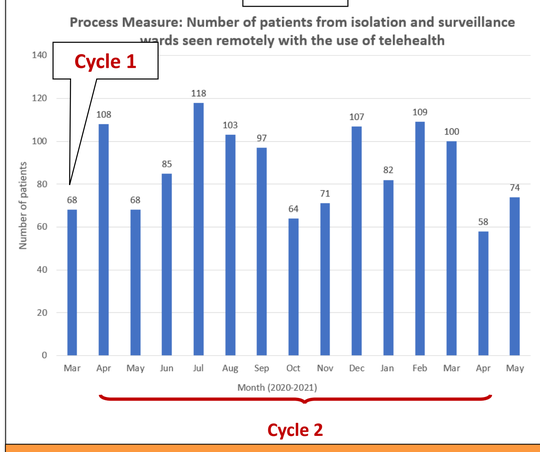


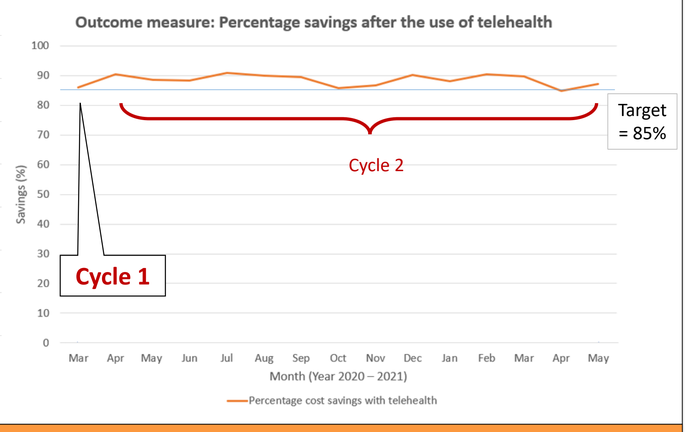
Test & Implement Changes

How do we pilot the changes? What are the initial results?

CYCLE	PLAN	DO	STUDY	ACT
1	HoD to provide instructions on adoption of telehealth with surveillance and pandemic patients in March 2020.	1. Dietitians are aware change in workflow 2. Dietitians started to see surveillance and pandemic patients remotely.	All pandemic and surveillance patients were seen remotely.	Dietitians are more familiar with providing telehealth to pandemic and surveillance patients. However some confusion in provision of telehealth were noted.
2	Concerns from dietitians were gathered during weekly department meetings from April 2020 to April 2021.	Discussions regarding in-patient telehealth were facilitated and addressed during weekly department meetings.	Continued 100% take up rate and patients were appropriately seen remotely.	A positive culture of learning and implementing new change was created. Plans were made to increase uptake of telehealth services in the outpatient settings.







Spread Changes, Learning Points

What are/were the strategies to spread change after implementation?

- *Dietitians to continually engage each other on issues they faced with telehealth*
- *HoD to inspire and identify a workgroup for the uptake of telehealth in the outpatient settings*

What are the key learnings from this project?

- *Camaraderie within the department supported the adoption of telehealth*
- *People requires clear guidance and continual engagement to implement changes*
- *There is a need to create a telehealth workflow for outpatient settings to vary the provision of care for patients*

Ng Teng Fong General Hospital

Jurong Community Hospital

References

1. Cohen J. COVID-19 capitalism: the profit motive versus public health. Public Health Ethics. 2020 doi: 10.1093/phe/phaa025.
2. Mehta, P., Stahl, M. G., Germone, M. M., Nagle, S., Guigli, R., Thomas, J., Shull, M., & Liu, E. (2020). Telehealth and Nutrition Support During the COVID-19 Pandemic. Journal of the Academy of Nutrition and Dietetics, 120(12), 1953–1957. https://doi.org/10.1016/j.jand.2020.07.013
3. Brunton, C., Arensberg, M. B., Drawert, S., Badaracco, C., Everett, W., & McCauley, S. M. (2021). Perspectives of Registered Dietitian Nutritionists on Adoption of Telehealth for Nutrition Care during the COVID-19 Pandemic. Healthcare (Basel, Switzerland), 9(2), 235. https://doi.org/10.3390/healthcare9020235
4. Monaghesh, E., Hajizadeh, A. The role of telehealth during COVID-19 outbreak: a systematic review based on current evidence. BMC Public Health 20, 1193 (2020). https://doi.org/10.1186/s12889-020-09301-4