

MASTER

peripherals & machine vision for
digital humans

includes health ecosystems

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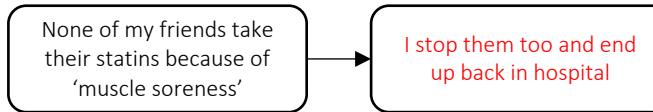
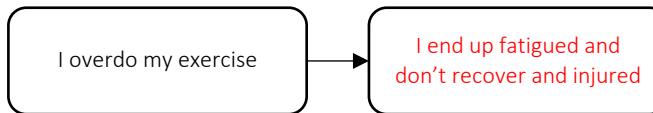
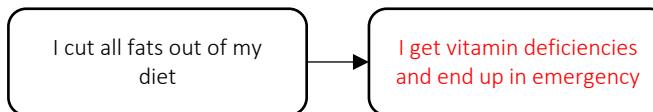
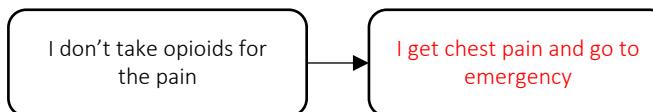
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even if you are health literate emotions can drive behaviors



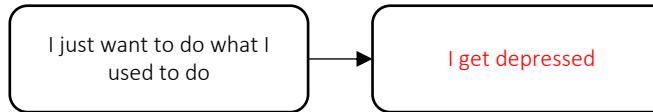
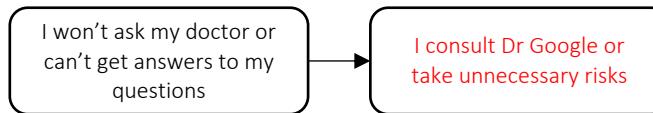
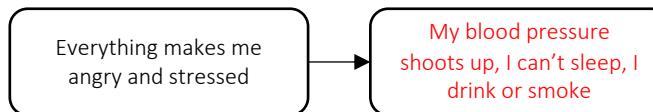
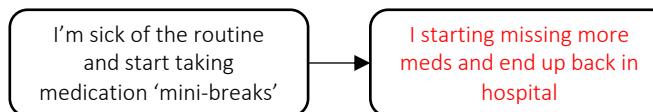
Anxious

- I want to know everything I can do
- I want to know why others are doing or taking something and I'm not
- I will overdo what I am told – over exercise, cut all fats from my diet etc.
- I won't do things that scare me like take opioids for the pain
- I want to talk to someone but don't want to worry my family or friends
- I want to know if this will happen again and when
- I want confirmation that it has worked



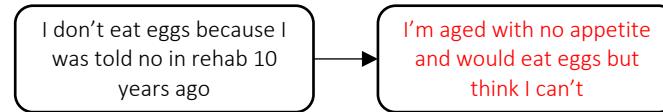
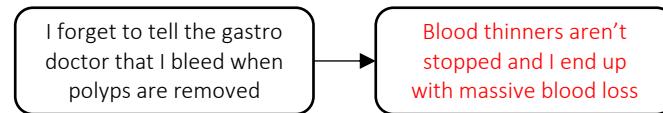
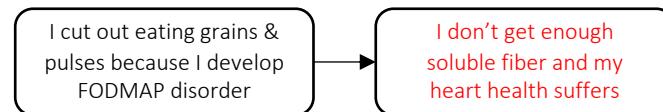
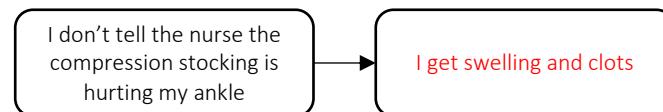
Angry

- I want to know why I have to do this or take these and others don't
- I'm sick of the routine – take these meds every morning and night, walk every day, measure everything I eat
- I just want to do what I used to do
- How do I find the answer to my questions without having to pay a doctor every time e.g. is it safe for me to ski
- Why can't anyone answer my questions e.g. my doctor doesn't know if it safe for me to ski and doesn't know who I can ask

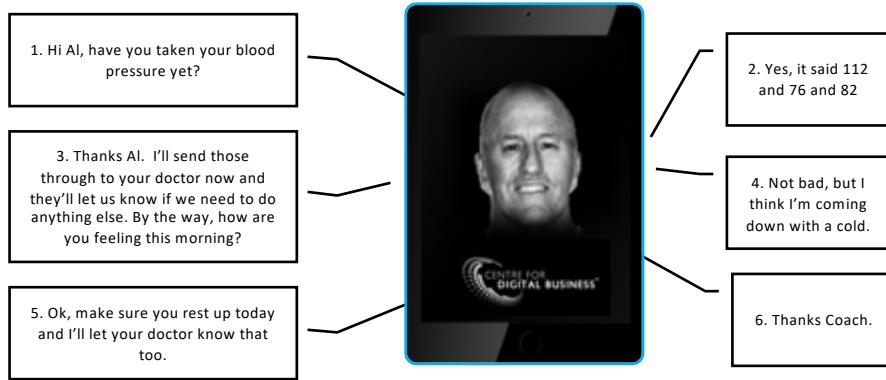


Accepting

- I have unquestioning compliance and won't express my needs or concerns especially in hospital, aged care or other managed care facility
- I won't volunteer information
- Everything is so routine I just forget to do them
- I don't bother to ask if the recommended medications and lifestyles have changed
- I have aged; my health has changed; or I've drastically changed my lifestyle (including diet and activity) but haven't checked to see if what I do for my heart should change

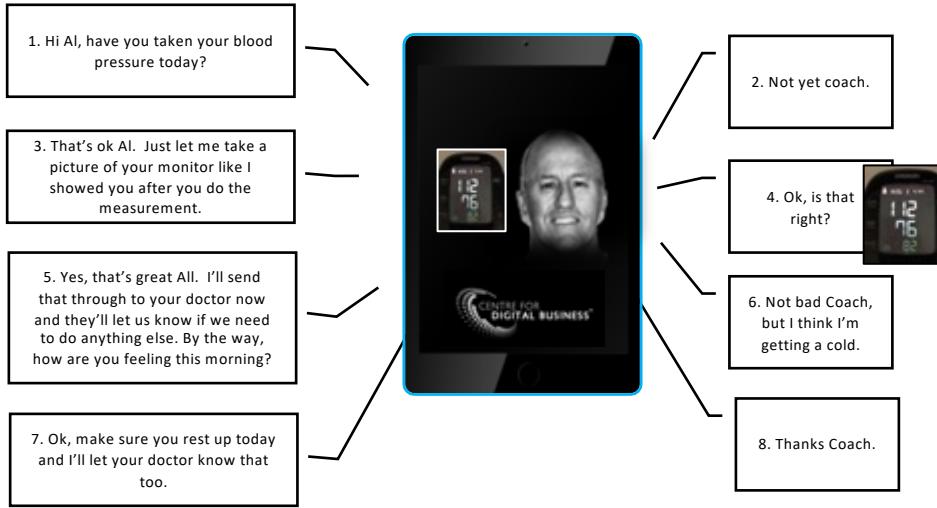


A | Using conversation to capture measurement & supplementary data



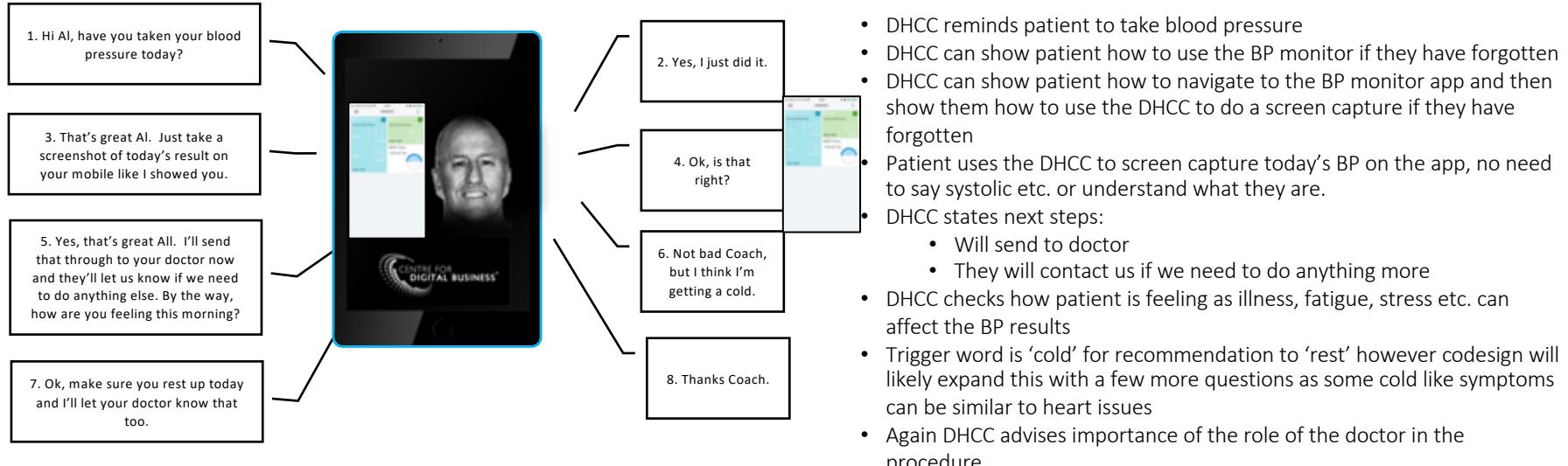
- DHCC reminds patient to take blood pressure
- DHCC can show patient how to use the BP monitor if they have forgotten
- Patient simply recites the numbers in order as they appear on the BP monitor, no need to say systolic etc. or understand what they are.
- DHCC states next steps:
 - Will send to doctor
 - They will contact us if we need to do anything more
- DHCC checks how patient is feeling as illness, fatigue, stress etc. can affect the BP results
- Trigger word is 'cold' for recommendation to 'rest' however codesign will likely expand this with a few more questions as some cold like symptoms can be similar to heart issues
- Again DHCC advises importance of the role of the doctor in the procedure

B | Using machine vision to capture measurement & conversation for supplementary data

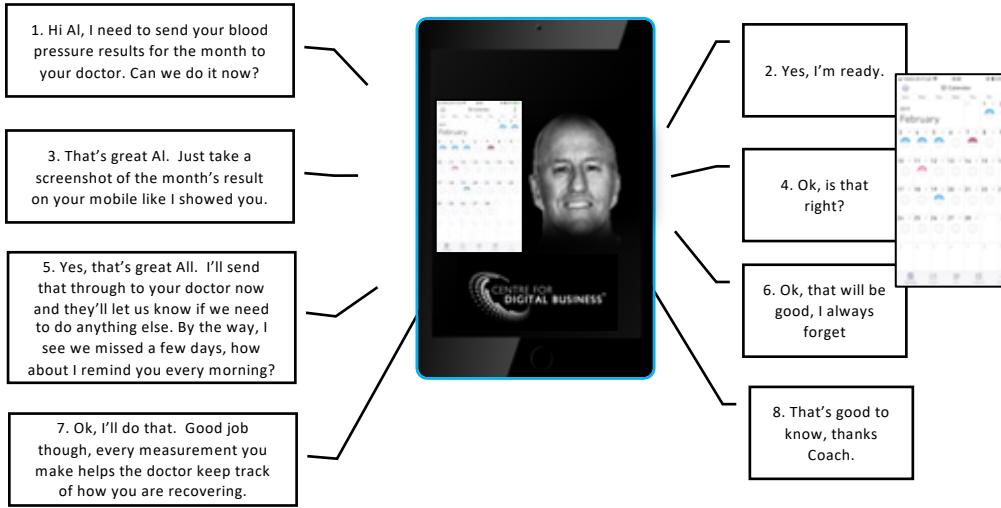


- DHCC reminds patient to take blood pressure
- DHCC can show patient how to use the BP monitor if they have forgotten
- DHCC can show patient how to use it to take a picture of the BP monitor if they have forgotten
- Patient uses the DHCC to take a picture of the display on the BP monitor, no need to say systolic etc. or understand what they are.
- DHCC states next steps:
 - Will send to doctor
 - They will contact us if we need to do anything more
- DHCC checks how patient is feeling as illness, fatigue, stress etc. can affect the BP results
- Trigger word is 'cold' for recommendation to 'rest' however codesign will likely expand this with a few more questions as some cold like symptoms can be similar to heart issues
- Again DHCC advises importance of the role of the doctor in the procedure

C | Using screen capture on BP Monitor app & conversation for supplementary data



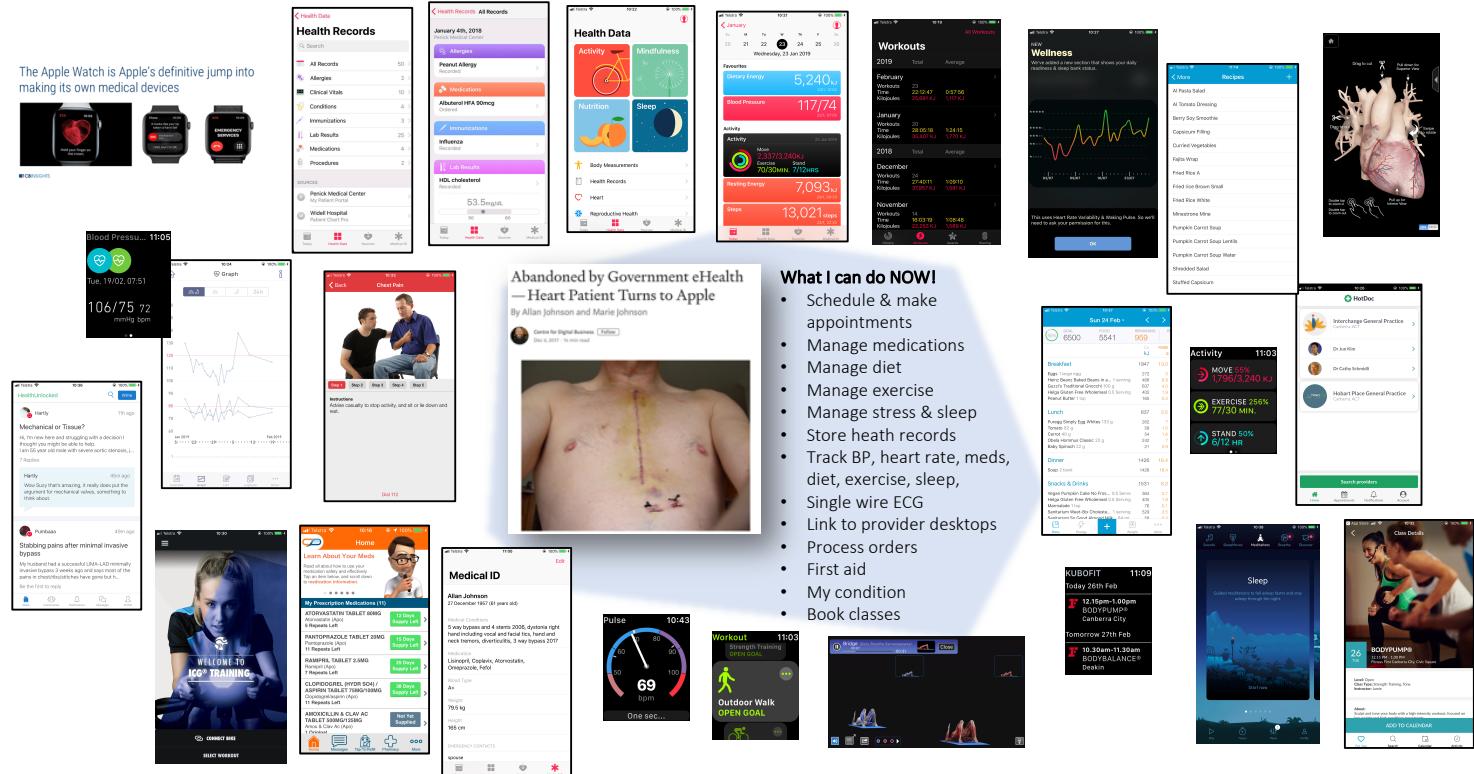
D | Using screen capture on BP Monitor app for monthly results & machine vision analysis to detect data gaps

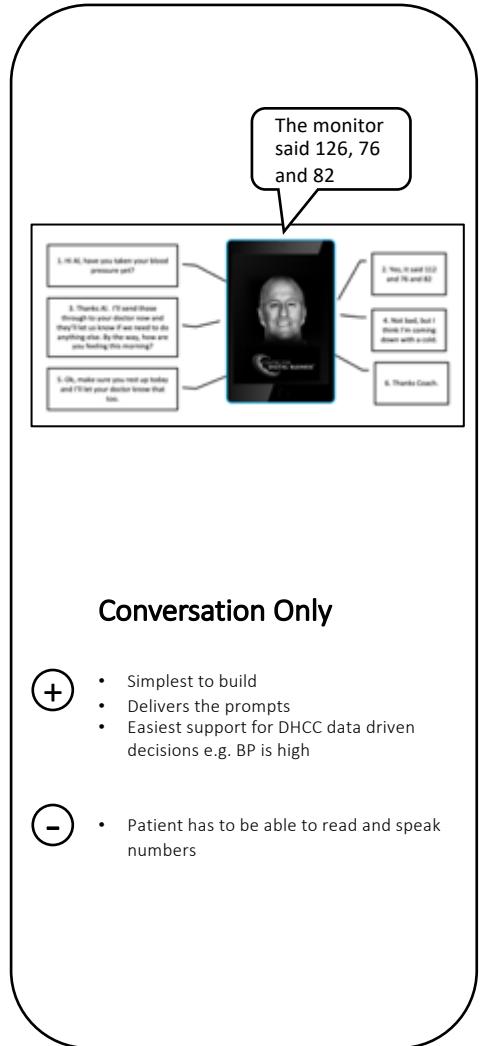


- DHCC reminds patient its time to submit monthly BP results
- DHCC can show patient how to navigate to the BP monitor app and then show them how to use the DHCC to do a screen capture if they have forgotten
- Patient uses the DHCC to screen capture this month's BP data on the app; conversation would be cumbersome to relay monthly data
- DHCC states next steps:
 - Will send to doctor
 - They will contact us if we need to do anything more
- DHCC uses machine vision analysis to detect gaps – BLUE denotes BP ok, RED denotes BP is high so white space indicates no measurement taken; note that color interpretation could later be used to identify and discuss high/low blood pressure.
- DHCC recommends daily reminders to capture BP; this is critical especially in first 90 days and ongoing for certain conditions
- Again DHCC advises importance of the role of the doctor in the procedure

E | Using the Apple Health ecosystem as a ‘one stop shop’ for screen capture of data such as BP, RHR, sleep

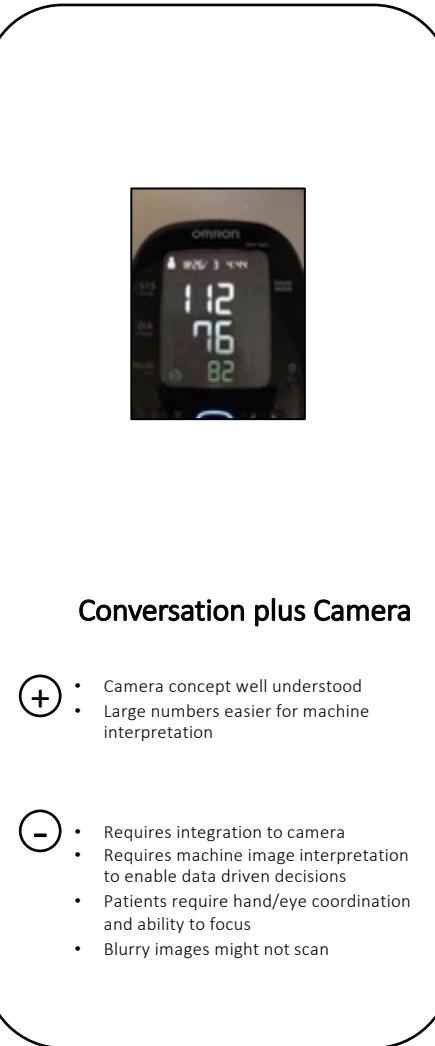
- Some device apps (e.g. Omron Wireless BP Monitor) integrate with Apple Health so daily data, monthly data, trends etc. can be screen captured there along with diet, sleep, RHR etc. This would reduce the onboarding effort and complexity for patients.
- Some apps also connect with practitioner desktops. For example, Easy Diet Diary (Australia only) integrates to dietitian desktops.
- Ultimately DHCC would need to choose between integration with multiple apps or integration with just the Apple Health Ecosystem. Given the Apple Health ecosystem and app also supports HL7 ERM for health records and is rolling our ECG on Apple Watches the future direction is probably pretty clear.





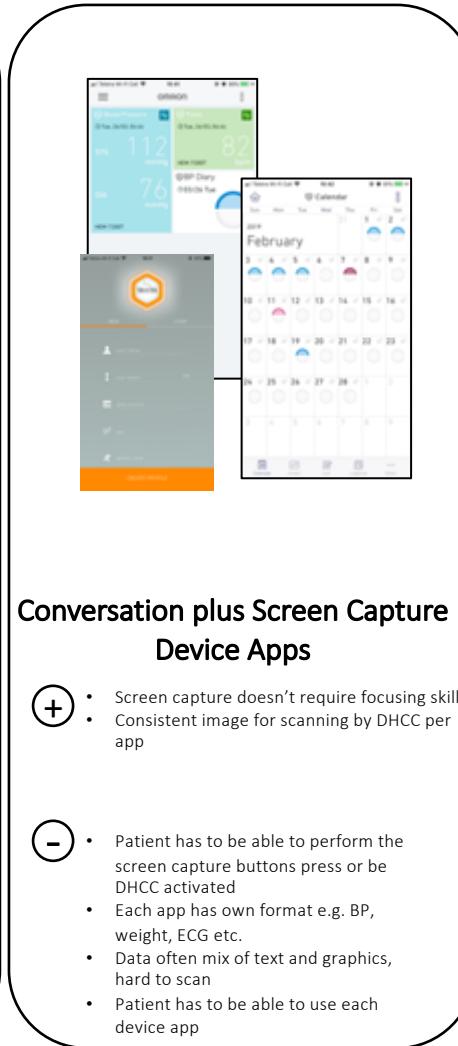
Conversation Only

- + Simplest to build
- + Delivers the prompts
- + Easiest support for DHCC data driven decisions e.g. BP is high
- Patient has to be able to read and speak numbers



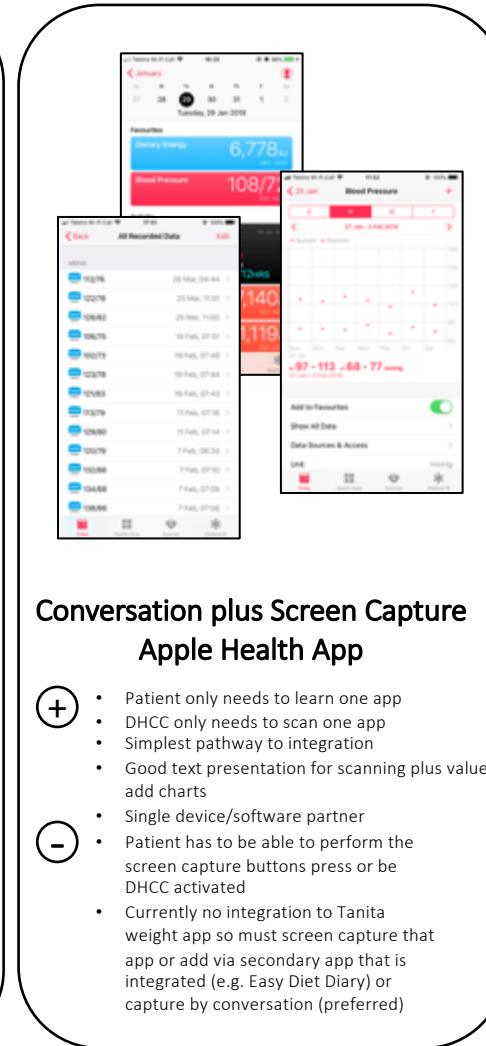
Conversation plus Camera

- + Camera concept well understood
- + Large numbers easier for machine interpretation
- Requires integration to camera
- Requires machine image interpretation to enable data driven decisions
- Patients require hand/eye coordination and ability to focus
- Blurry images might not scan



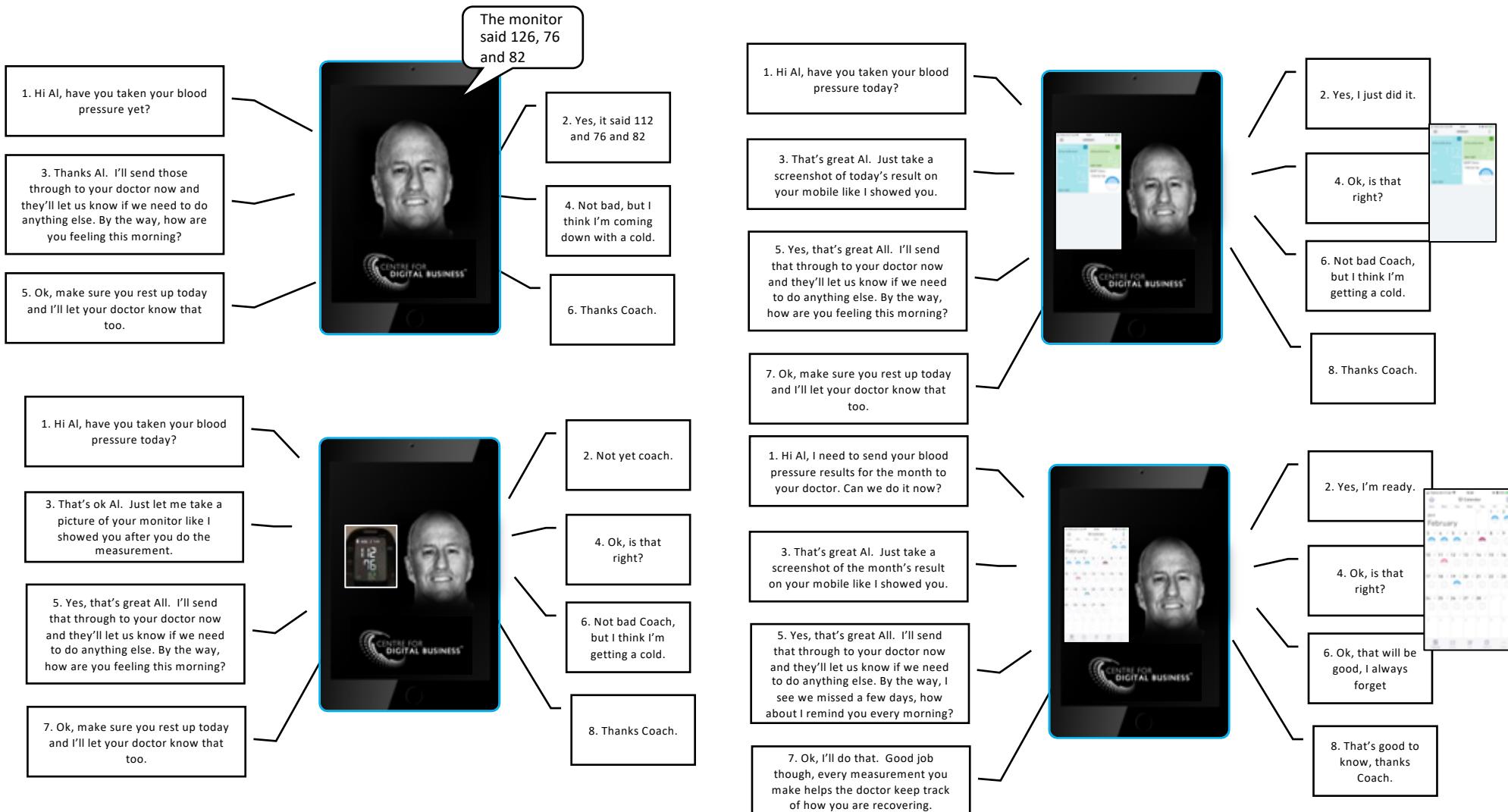
Conversation plus Screen Capture Device Apps

- + Screen capture doesn't require focusing skills
- + Consistent image for scanning by DHCC per app
- Patient has to be able to perform the screen capture buttons press or be DHCC activated
- Each app has own format e.g. BP, weight, ECG etc.
- Data often mix of text and graphics, hard to scan
- Patient has to be able to use each device app



Conversation plus Screen Capture Apple Health App

- + Patient only needs to learn one app
- + DHCC only needs to scan one app
- + Simplest pathway to integration
- + Good text presentation for scanning plus value add charts
- + Single device/software partner
- Patient has to be able to perform the screen capture buttons press or be DHCC activated
- Currently no integration to Tanita weight app so must screen capture that app or add via secondary app that is integrated (e.g. Easy Diet Diary) or capture by conversation (preferred)



health ecosystems - knowledge of and control over my personal health in my hands

The Apple Watch is Apple's definitive jump into making its own medical devices



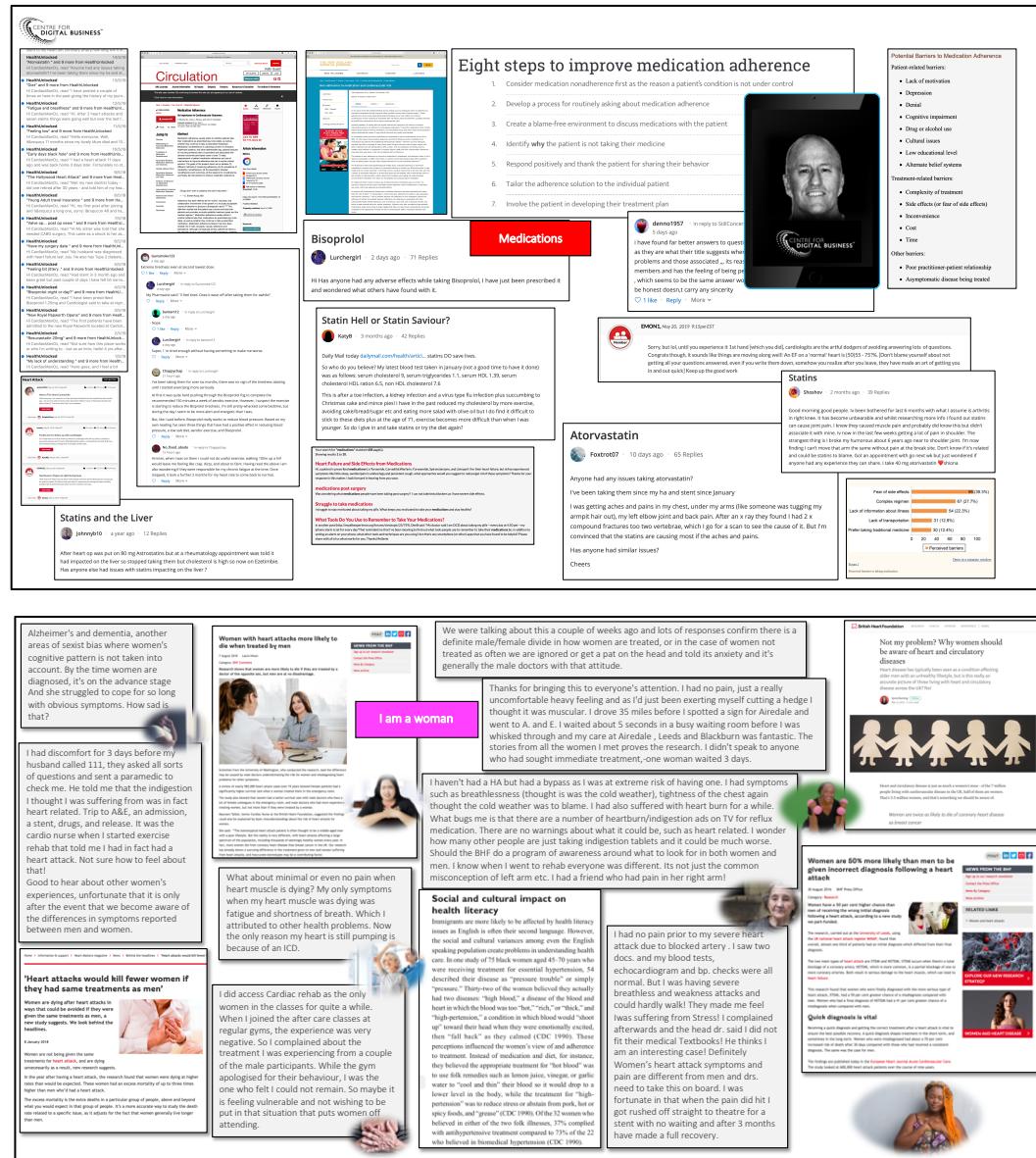
Abandoned by Government eHealth — Heart Patient Turns to Apple
By Allan Johnson and Marie Johnson
(Oct 6, 2017) — By Alan Head

What I can do NOW!

- Schedule & make appointments
- Manage medications
- Manage diet
- Manage exercise
- Manage stress & sleep
- Store health records
- Track BP, heart rate, meds, diet, exercise, sleep,
- Single wire ECG
- Link to provider desktops
- Process orders
- First aid
- My condition
- Book classes

accelerator | research + patient forums = target interactions

map to codes / penalties / litigation



Eight steps to improve medication adherence

- Consider medication nonadherence first as the reason a patient's condition is not under control
- Develop a process for routinely asking about medication adherence
- Create a blame-free environment to discuss medications with the patient
- Identify why the patient is not taking their medicine
- Respond positively and thank the patient for sharing their behavior
- Tailor the adherence solution to the individual patient
- Involve the patient in developing their treatment plan

Potential Barriers to Medication Adherence

- Patient-related barriers:
 - Lack of motivation
 - Depression
 - Illness
 - Cognitive impairment
 - Drug or alcohol use
 - Cultural issues
 - Low educational level
 - Alternate belief systems
- Treatment-related barriers:
 - Complexity of treatment
 - Side effects (or fear of side effects)
 - Cost
 - Care
 - Time
 - Other barriers

Not connected

Rare

Common

Life Style Impacts

Side Effects

What is it?

Preparation

Recovery

Risks

The doctors ignore me

I am a woman

My partner won't listen

It's just stress

It's not what I've seen on TV

Health System

Feelings

Meds

Insurance

Lifestyle

Travel

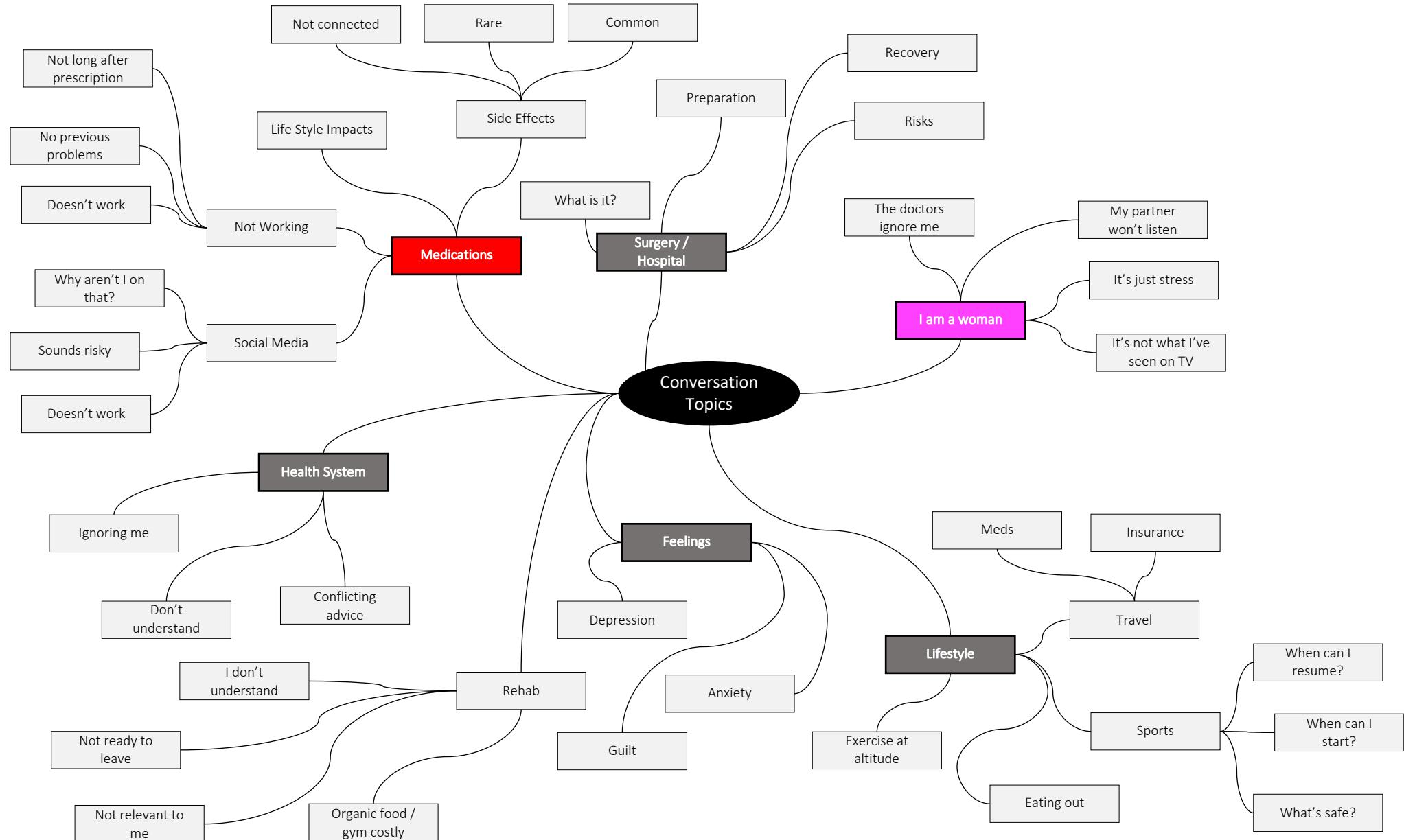
Sports

Eating out

When can I resume?

When can I start?

What's safe?



HealthUnlocked 14/5/19 "Atorvastatin" and 9 more from HealthUnlocked

H CardiacMan02, read: "Anyone had any issues taking atorvastatin? I've been taking them since my heart st..."

HealthUnlocked 13/5/19 "Diet" and 9 more from HealthUnlocked

H CardiacMan02, read: "I have posted a couple of times on here in the past giving the history of my journ..."

HealthUnlocked 13/5/19 "Fatigue and breathless" and 9 more from HealthUnlocked

H CardiacMan02, read: "After 2 heart attacks and seven stents things were going well but over the last ..."

HealthUnlocked 11/5/19 "Feeling low" and 9 more from HealthUnlocked

H CardiacMan02, read: "Hello everyone, Well, it'snow 11 months since my lovely Mum died and 10..."

HealthUnlocked 10/5/19 "Early days black hole" and 9 more from HealthUnlocked

H CardiacMan02, read: "I had a heart attack 11 days ago and was back home 3 days later. Fortunately no st..."

HealthUnlocked 9/5/19 "The Hollywood Heart Attack" and 9 more from HealthUnlocked

H CardiacMan02, read: "Met my new dentist today - old one retired after 30 years - and told him of my he..."

HealthUnlocked 8/5/19 "Young Adult Travel Insurance" and 9 more from HealthUnlocked

H CardiacMan02, read: "Hi, my first post after joining and it'snow a long one, sorry! I'msoy 46 and ha..."

HealthUnlocked 7/5/19 "Valve op - post op news" and 9 more from HealthUnlocked

H CardiacMan02, read: "My sisiter was told that she needed CABG surgery. This came as a shock to her as..."

HealthUnlocked 6/5/19 "Have my surgery date" and 9 more from HealthUnlocked

H CardiacMan02, read: "My husband was diagnosed with heart failure last July. He also has Type 2 diabetes..."

HealthUnlocked 5/5/19 "Feeling bit jittery" and 9 more from HealthUnlocked

H CardiacMan02, read: "Had stent in 3 month ago and been great but past couple of days I have felt bit nervous..."

HealthUnlocked 4/5/19 "Bisoprolol-night or day?" and 9 more from HealthUnlocked

H CardiacMan02, read: "I have been prescribed Bisoprolol 1.25mg and Cardiologist said to take at night..."

HealthUnlocked 3/5/19 "New Royal Papworth Opens" and 9 more from HealthUnlocked

H CardiacMan02, read: "The first patients have been admitted to the new Royal Papworth located at Cambri..."

HealthUnlocked 2/5/19 "Rosuvastatin 20mg" and 9 more from HealthUnlocked

H CardiacMan02, read: "Not sure how this place works or who I'm writing to - but as an intro, hefto 4 yrs after..."

HealthUnlocked 1/5/19 "My lack of understanding" and 9 more from HealthUnlocked

H CardiacMan02, read: "Here goes, and I feel a bit..."

Circulation

Medication Adherence

Medication Adherence is a growing concern in clinical practice. Medication nonadherence is a problem in all diseases, but especially in cardiovascular diseases. Nonadherence is associated with increased risk of hospitalization and death. The goal of this article is to present an overview of medication adherence and its impact on cardiovascular outcomes.

Abstract

Medication nonadherence refers to a patient's failure to take their medications as directed. Nonadherence is a growing concern in clinical practice. Medication nonadherence is a problem in all diseases, but especially in cardiovascular diseases. Nonadherence is associated with increased risk of hospitalization and death. The goal of this article is to present an overview of medication adherence and its impact on cardiovascular outcomes.

Introduction

Medication nonadherence is a problem in all diseases, but especially in cardiovascular diseases. Nonadherence is associated with increased risk of hospitalization and death. The goal of this article is to present an overview of medication adherence and its impact on cardiovascular outcomes.

Conclusion

Medication nonadherence is a problem in all diseases, but especially in cardiovascular diseases. Nonadherence is associated with increased risk of hospitalization and death. The goal of this article is to present an overview of medication adherence and its impact on cardiovascular outcomes.

Non-adherence to medication and cardiovascular risk

Abstract

Non-adherence to medication is a growing concern in clinical practice. Medication nonadherence is a problem in all diseases, but especially in cardiovascular diseases. Nonadherence is associated with increased risk of hospitalization and death. The goal of this article is to present an overview of medication adherence and its impact on cardiovascular outcomes.

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Eight steps to improve medication adherence

1. Consider medication nonadherence first as the reason a patient's condition is not under control
2. Develop a process for routinely asking about medication adherence
3. Create a blame-free environment to discuss medications with the patient
4. Identify why the patient is not taking their medicine
5. Respond positively and thank the patient for sharing their behavior
6. Tailor the adherence solution to the individual patient
7. Involve the patient in developing their treatment plan



Gummoek123 a day ago Extreme tiredness even at second lowest dose.

Lurchergirl 2 days ago 71 Replies

Has anyone had any adverse effects while taking Bisoprolol, I have just been prescribed it and wondered what others have found with it.

Medications

Bisoprolol

Lurchergirl 2 days ago 71 Replies

Has anyone had any adverse effects while taking Bisoprolol, I have just been prescribed it and wondered what others have found with it.

Heart Attack

No_fused_abide 11 hours ago I've been taking them for over six months, there was no sign of the tiredness abating until I started exercising more seriously.

At first it was quite hard pushing through the Bisoprolol fog to complete the recommended 150 minutes a week of aerobic exercise. However, I suspect the exercise is starting to reduce the Bisoprolol tiredness. I'm still pretty whacked come bedtime, but during the day I seem to be more alert and energetic than I was.

But, like I said before, Bisoprolol really works to reduce blood pressure. Based on my own reading I've seen three things that have had a positive effect in reducing blood pressure, a low salt diet, aerobic exercise, and Bisoprolol.

No_fused_abide 11 hours ago I'm still taking the Bisoprolol but I'm not taking it as much as I used to. I'm still taking it but I'm not taking it as much as I used to.

Statins and the Liver

Johnnyb10 a year ago 12 Replies

After heart op was put on 80 mg Astorstatins but at a rheumatology appointment was told it had impacted on the liver so stopped taking them but cholesterol is high so now on Ezetimibe. Has anyone else had issues with statins impacting on the liver?

Statin Hell or Statin Saviour?

KatyB 3 months ago 42 Replies

Daily Mail today dailymail.com/health/article... statins DO save lives.

So who do you believe? My latest blood test taken in January (not a good time to have it done) was as follows: serum cholesterol 9, serum triglycerides 1.1, serum HDL 1.39, serum cholesterol HDL ration 6.5, non HDL cholesterol 7.6

This is after a toe infection, a kidney infection and a virus type flu infection plus succumbing to Christmas cake and mince pie! I have in the past reduced my cholesterol by more exercise, avoiding cake/bread/sugar etc and eating more salad with olive oil but I do find it difficult to stick to these diets plus at the age of 71, exercise becomes more difficult than when I was younger. So do I give in and take statins or try the diet again?

Your search for "medications" matched 498 pages. Showing results 1 to 30.

Heart Failure and Side Effects from Medications

Hf, a group of prescription drugs (ie Furosemide, Canrenoate/Mefapa, Furosemide, and Lisinopril) for their heart failure, but has experienced symptoms like shortness of breath, irregular heartbeats and persistent cough, what approaches would you suggest to reduce/got rid of these symptoms? Thankyou for your responses in this matter. I look forward in hearing your views.

Medications post surgery

Wtewonderingwhatmedicationspeoplehavebeentakingpost surgery? I can't seem to take ibuprofen as I have severe side effects.

Struggle to take medications

I struggle to stay motivated about taking my pills. What keeps you motivated to take your medications and stay healthy?

What Do You Use to Remember to Take Your Medications?

In another post (http://clerkshipexperience.org/forum/thread/25779/), David said: "My doctor told me I OCD about taking my pills—every day at 4pm—my phone alarm is set for every day." That reminded me that I've been meaning to find out what tools people use to remember to take their medications. So, in addition to setting an alarm on your phone, what other tools and techniques are you using? Are there any smartphone (or other) apps that you have found to be helpful? Please share with all of us what works for you. Thanks, Michaela

After heart op was put on 80 mg Astorstatins but at a rheumatology appointment was told it had impacted on the liver so stopped taking them but cholesterol is high so now on Ezetimibe. Has anyone else had issues with statins impacting on the liver?

Statins

Shoshev 2 months ago 39 Replies

Good morning good people. I've been bothered for last 6 months with what I assume is arthritis in right knee. It has become unbearable and whilst researching more info I found out statins can cause joint pain. I knew they caused muscle pain and probably did know this but didn't associate it with mine. I'm now in the last few weeks getting a lot of pain in shoulder. The strangest thing is I broke my humerus about 6 years ago near to shoulder joint. I'm now finding I can't move that arm the same without pain at the break site. Don't know if it's related and could be statins to blame. Got an appointment with go next wk but just wondered if anyone had any experience they can share. I take 40 mg atorvastatin ❤ shoshev

Atorvastatin

Foxtrot07 10 days ago 65 Replies

Anyone had any issues taking atorvastatin?

I've been taking them since my ha and stent since January

I was getting aches and pains in my chest, under my arms (like someone was tugging my armpit hair out), my left elbow joint and back pain. After an x ray they found I had 2 x compound fractures to two vertebrae, which I go for a scan to see the cause of it. But I'm convinced that the statins are causing most of the aches and pains.

Has anyone had similar issues?

Potential Barriers to Medication Adherence

Patient-related barriers:

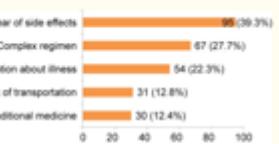
- Lack of motivation
- Depression
- Denial
- Cognitive impairment
- Drug or alcohol use
- Cultural issues
- Low educational level
- Alternate belief systems

Treatment-related barriers:

- Complexity of treatment
- Side effects (or fear of side effects)
- Inconvenience
- Cost
- Time

Other barriers:

- Poor practitioner-patient relationship
- Asymptomatic disease being treated



Open in a separate window

Alzheimer's and dementia, another areas of sexist bias where women's cognitive pattern is not taken into account. By the time women are diagnosed, it's on the advance stage And she struggled to cope for so long with obvious symptoms. How sad is that?

I had discomfort for 3 days before my husband called 111, they asked all sorts of questions and sent a paramedic to check me. He told me that the indigestion I thought I was suffering from was in fact heart related. Trip to A&E, an admission, a stent, drugs, and release. It was the cardio nurse when I started exercise rehab that told me I had in fact had a heart attack. Not sure how to feel about that!

Good to hear about other women's experiences, unfortunate that it is only after the event that we become aware of the differences in symptoms reported between men and women.

[Home](#) > [Information & support](#) > [Heart matters magazine](#) > [News](#) > [Behind the headlines](#) > ['Heart attacks would kill fewer women if they had same treatments as men'](#)



'Heart attacks would kill fewer women if they had same treatments as men'

Women are dying after heart attacks in ways that could be avoided if they were given the same treatments as men, a new study suggests. We look behind the headlines.

8 January 2016

Women are not being given the same treatments for [heart attack](#), and are dying unnecessarily as a result, new research suggests.

In the year after having a heart attack, the research found that women were dying at higher rates than would be expected. These women had an excess mortality of up to three times higher than men who'd had a heart attack.

The excess mortality is the extra deaths in a particular group of people, above and beyond what you would expect in that group of people. It's a more accurate way to study the death rate related to a specific issue, as it adjusts for the fact that women generally live longer than men.

Women with heart attacks more likely to die when treated by men

7 August 2016 Laura Misan

Category: [BHF Comment](#)

Research shows that women are more likely to die if they are treated by a doctor of the opposite sex, but men are at no disadvantage.

I am a woman

Lauren Tolles, Senior Cardiac Nurse at the British Heart Foundation, suggested the findings could also be explained by basic misunderstandings about the risk of heart attacks for women.

A review of nearly 382,000 heart attack cases over 15 years showed female patients had a significantly higher survival rate when a woman treated them in the emergency room. The study also showed that women had a better survival rate with male doctors who have a lot of female colleagues in the emergency room, and male doctors who had more experience treating women, but not more than if they were treated by a woman.

Lauren Tolles, Senior Cardiac Nurse at the British Heart Foundation, suggested the findings could also be explained by basic misunderstandings about the risk of heart attacks for women.

She said: "The stereotypical heart attack patient is often thought to be a middle-aged man with a poor lifestyle. But the reality is very different, with heart attacks affecting a large spectrum of the population, including women, especially during pregnancy, every year. In fact, women die from heart disease than cancer in the UK every year. Our research has already shown a worrying difference in the treatment given to men and women suffering from heart attacks, and inaccurate stereotypes may be a contributing factor."

What about minimal or even no pain when heart muscle is dying? My only symptoms when my heart muscle was dying was fatigue and shortness of breath. Which I attributed to other health problems. Now the only reason my heart is still pumping is because of an ICD.

I did access Cardiac rehab as the only women in the classes for quite a while. When I joined the after care classes at regular gyms, the experience was very negative. So I complained about the treatment I was experiencing from a couple of the male participants. While the gym apologised for their behaviour, I was the one who felt I could not remain. So maybe it is feeling vulnerable and not wishing to be put in that situation that puts women off attending.

We were talking about this a couple of weeks ago and lots of responses confirm there is a definite male/female divide in how women are treated, or in the case of women not treated as often we are ignored or get a pat on the head and told its anxiety and it's generally the male doctors with that attitude.

Thanks for bringing this to everyone's attention. I had no pain, just a really uncomfortable heavy feeling and as I'd just been exerting myself cutting a hedge I thought it was muscular. I drove 35 miles before I spotted a sign for Airedale and went to A. and E. I waited about 5 seconds in a busy waiting room before I was whisked through and my care at Airedale , Leeds and Blackburn was fantastic. The stories from all the women I met proves the research. I didn't speak to anyone who had sought immediate treatment,-one woman waited 3 days.

I haven't had a HA but had a bypass as I was at extreme risk of having one. I had symptoms such as breathlessness (thought it was the cold weather), tightness of the chest again thought the cold weather was to blame. I had also suffered with heart burn for a while. What bugs me is that there are a number of heartburn/indigestion ads on TV for reflux medication. There are no warnings about what it could be, such as heart related. I wonder how many other people are just taking indigestion tablets and it could be much worse. Should the BHF do a program of awareness around what to look for in both women and men. I know when I went to rehab everyone was different. Its not just the common misconception of left arm etc. I had a friend who had pain in her right arm!

Social and cultural impact on health literacy

Immigrants are more likely to be affected by health literacy issues as English is often their second language. However, the social and cultural variances among even the English speaking population create problems in understanding health care. In one study of 75 black women aged 45–70 years who were receiving treatment for essential hypertension, 54 described their disease as "pressure trouble" or simply "pressure." Thirty-two of the women believed they actually had two diseases: "high blood," a disease of the blood and heart in which the blood was too "hot," "rich," or "thick," and "high-pertension," a condition in which blood would "shoot up" toward their head when they were emotionally excited, then "fall back" as they calmed (CDC 1990). These perceptions influenced the women's view of and adherence to treatment. Instead of medication and diet, for instance, they believed the appropriate treatment for "hot blood" was to use folk remedies such as lemon juice, vinegar, or garlic water to "cool and thin" their blood so it would drop to a lower level in the body, while the treatment for "high-pertension" was to reduce stress or abstain from pork, hot or spicy foods, and "grease" (CDC 1990). Of the 32 women who believed in either of the two folk illnesses, 37% complied with antihypertensive treatment compared to 73% of the 22 who believed in biomedical hypertension (CDC 1990).

I had no pain prior to my severe heart attack due to blocked artery . I saw two docs. and my blood tests, echocardiogram and bp. checks were all normal. But I was having severe breathless and weakness attacks and could hardly walk! They made me feel I was suffering from Stress! I complained afterwards and the head dr. said I did not fit their medical Textbooks! He thinks I am an interesting case! Definitely Women's heart attack symptoms and pain are different from men and drs. need to take this on board. I was fortunate in that when the pain did hit I got rushed off straight to theatre for a stent with no waiting and after 3 months have made a full recovery.

Not my problem? Why women should be aware of heart and circulatory diseases

Heart disease has typically been seen as a condition affecting older men with an unhealthy lifestyle, but is this really an accurate picture of those living with heart and circulatory disease across the UK? No!

Heart and circulatory disease is just as much a women's issue - of the 7 million people living with cardiovascular disease in the UK, half of them are women. That's 3.5 million women, and that's something we should be aware of.

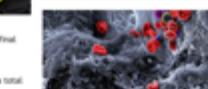
Women are twice as likely to die of coronary heart disease as breast cancer

Women are 50% more likely than men to be given incorrect diagnosis following a heart attack

30 August 2016 BHF Press Office

Category: [Research](#)

Women have a 50 per cent higher chance than men of receiving the wrong initial diagnosis following a heart attack, according to a new study we part-funded.



EXPLORING OUR NEW RESEARCH STRATEGY



The research, carried out at the [University of Leeds](#), using the [UK national heart attack register NHAN](#), found that overall, almost one third of patients had an initial diagnosis which differed from their final diagnosis.

This research found that women who were diagnosed with the more serious type of heart attack, STEMI, had a 50 per cent greater chance of a misdiagnosis compared with men. Women who had a final diagnosis of HSTEMI had a 41 per cent greater chance of a misdiagnosis when compared with men.

Quick diagnosis is vital

Receiving a quick diagnosis and getting the correct treatment after a heart attack is vital to ensure the best possible recovery. A quick diagnosis shapes treatment in the short-term, and sometimes in the long-term. Women who were misdiagnosed had about a 70 per cent increased risk of death after 30 days compared with those who had received a consistent diagnosis. The same was the case for men.

The findings are published today in the [European Heart Journal Acute Cardiovascular Care](#). The study looked at 800,000 heart attack patients over the course of nine years.

