HEALTH LITERACY & HEART FAILURE

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The battle preventing heart disease – successful?

Deaths per 100,000 population

- Coronary heart disease
- Cerebrovascular disease
- Diabetes
- Cancers
- COPD
- Other chronic diseases


0 100 200 300 400 500 600 700 800 900 1,000

AIHW 2014
Are some people being left behind?

Ethnicity and location effect outcomes

AIHW 2014
Are some people being left behind?

The socioeconomic gradient

Data source: 45 and Up Study (unpublished)
WHY ARE SOME PEOPLE BEING LEFT BEHIND?

Australians are not all equally equipped to:

1. make the best health choices
2. access healthcare when and how they need to
3. access and understand available evidence-based information

Health literacy

Poor health literacy decreases the capacity for people to understand and act in their own interest in health care

Adams et al 2009 MJA
24% of Australians have limited health literacy, especially:

- Less educated and lower income
- Men
- Born outside Australia, NZ, UK and Ireland
- In worse health and seeing a doctor less often
- Diagnosed with diabetes, stroke or cardiac disease

Adams et al 2009 MJA
Low health literacy leads to:

- Less mammography screening and influenza vaccines
- Worse medication adherence and less ability to interpret information
- More hospital admissions and use of emergency care
- In older people, worse health and higher mortality

Berkman et al 2011
HEALTH LITERACY - HEART FAILURE OUTCOMES

Peterson et al., JAMA 2011
HEALTH LITERACY

Individual

Environment

ACSQHC, 2014
HEALTH LITERACY

Individual

The skills, knowledge, motivation and capacity of a person to access, understand, appraise and apply information to make effective decisions about health and healthcare and take appropriate action.

The ability to access, understand and use information for health

ACSQHC, 2014
HEALTH LITERACY

The ability to access, understand and use information for health

ACSQHC, 2014
NAVIGATING THE HOSPITAL
IMPACT OF LOW HEALTH LITERACY
Take your blood pressure tablets twice a day

› What does that mean?
  › AM and PM
  › Waking and bedtime
  › Before breakfast and before dinner
  › 12 hours apart same times every day 6am (set the alarm) and 6pm (carry my tablets with me)
Get a flu vaccination each year when you are > 65 years

› What does that mean?

› Don’t get flu vaccination if you are < 65 years
› Get flu vaccination in January every year
› Get flu vaccination at cheapest service
› Get flu vaccination when you get the flu
› Get multiple flu vaccinations as flu variety changes
Medication health literacy

Increase your diuretic when you get sick before you see me

› Increase the dose from 2 to 3/day
› Increase the number of doses from 1 to 2/day
› Increase the dose when I am short of breath
› Increase the dose when my weight increases more than 2 kg in 3 days
› Increase the dose by one tablet, wait a couple of days then see the Dr if I am not getting better
› Increase the dose by one tablet and make a Dr’s appointment as soon as possible

› What does that mean?
HEALTH LITERACY IS NOT STATIC

› Specific to a health context and to age and stage in life

› Even if a person has advanced literacy, their ability to obtain, understand and use health information in a specific health context may be poor

› Depends on the demands of the particular health issue and its prevention and treatments

Nutbeam 2003
HEALTH LITERACY AND HEALTH OUTCOMES

Paasche-Orlow and Wolf, 2007
American Journal of Health Behavior
PATIENT JOURNEY PERSPECTIVES: HEALTH PROVIDER

- Patient in the community
- Patient enters the service
- ED to Inpatient
- Inpatient to Inpatient
- Patient exits service
- Patient in the community

Clinical Management Plan — IDT Ward Round — Estimated Date of Discharge — Waiting for What — Criteria Led Discharge — Transfer of Care

Leads: ACT, MOH, CEC

Obwrite portfolio 2014
PATIENT JOURNEY

First pre-hospital actor

- General Practitioner: 16%
- Cardiologist: 13%
- Medical Ambulance: 13%
- Emergency Department: 45%
- Others: 4%

Other Medical Department: 9% (ICU: n=5)

PATIENT JOURNEY
n = 257

Cardiology: n = 192 (ICCU: 48%)
Geriatrics: n = 65 (ICCU: 13%)

Discharge

- Returning Home: 64.4%
- Rehabilitation Care: 21%
- Medical Department: 7%
- Palliative Care: 0.4%
- Cardiac Surgery: 1.6%
- Others: 3.2%
- Deaths: 2.4%

Laveau et al. 2016
It’s probably nothing serious. I’m a fairly healthy person, a heart problem seems very unlikely. I’ll just wait and see if the shortness of breath will go away by itself over the next day or so.

I feel really sick. I wonder if it’s my blood pressure, but last time he (GP) said it was ok. Tom (work colleague) had chest pain and was short of breath last year and it was serious, but he’s much older than me. I feel so sick it’s probably best that I go to the doctor.

Should I go to the hospital instead, I can’t get into my doctor today?
HEART FAILURE SYMPTOMS EXPERIENCED BEFORE HOSPITALISATION (DAYS)

Gallagher et al. 2012
Heart attack symptom recognition and action

- Only symptom of heart attack most people recognise is chest pain
- Only half recognise this symptom as being important and needing urgent care
- People who visit the GP more often had no better recognition

Berkman et al., 2011 Annals of Internal Medicine, Mata et al, 2014 Health Expectations
Male 64 years, small business owner, year 12 education, active, hypertension, increasing shortness of breath

48 hours in hospital
I’m feeling better, I think I understand what the doctor said, that my heart isn’t as strong as it used to be and I need to take these tablets? Do I have to take all these tablets all the time? Maybe once everything settles down I will stop.

72 hours at home
I feel tired and nauseous this morning, will the heart problem start again? Maybe it’s the tablets, but I have to take them at 8 am like I did in hospital. Who can I talk to, I don’t see the cardiologist until next month. I don’t want to go to my doctor all the time.
Cardiac patients:
› 58% unable to describe even one diagnosis accurately
› 55% unable to report even one medication change after their appointment

Physicians providing treatment:
› 50% of the time underestimate cardiac functional class by at least one class of NYHA
› 67% of the time unaware of psychosocial barriers
› 69% of the time unaware of medication barriers

Sarkar et al 2011 PEC
INCREASING HEALTH LITERACY DEMAND
HEALTH LITERACY in HEART FAILURE

Health literacy in heart failure self-care is complex and high demand

- Multiple medications
- Need for early detection of worsening symptoms
- Self-treat where appropriate
- Timely seeking of health professional advice

Heart failure reduces health literacy skills/capacity:

- Aging, cognitive impairment and symptoms
Supply of medicines in the community, 1995-2009

**Antithrombotic**

**Lower blood pressure**

**Serum-lipid-reducing**

AIHW 2009
25% had cognitive impairment
18% noticed the impact of this impairment on their daily lives
Paasche-Orlow and Wolf, 2007
*American Journal of Health Behavior*
How can health professionals promote health literacy?

Use clear, focussed and usable information

- Use a ‘universal precautions’ approach, assume low literacy

- The content and format of information needs to be easy to understand
  - use plain language

- Slow down – speak clearly and at a moderate pace

- Present essential information first and by itself

- Information must be accurate, accessible and actionable

- Address gaps in knowledge and correct myths
"Well, yes, I suppose I could explain the test results in 'plain English' — but then you'd know how sick you are."
A one-page PADDLE letter was written by the resident or registrar using a template and language suited to the patient and delivered in person with opportunity to discuss, addressed:

- Reasons for hospitalisation and diagnosis
- Tests and results while in hospital
- Treatments received in hospital
- Recommendations for post discharge care
Registrars noted minimal time needed for intervention.
Pilot study identified lack of knowledge of heart attack symptoms and actions and nitrate spray use in cardiac rehabilitation patients.

Main health literacy problem areas identified:

- **Individual**
  - Not carrying nitrate spray
  - Limited knowledge of relevant symptoms for nitrate spray use and actions to take when heart attack symptoms occur

- **Environment**
  - Lack of systematic instruction processes, only 43% recalled receiving any instruction

Gallagher et al, 2010 JCVN
Baseline assessment of specific health literacy

Delivered brief education aimed at correcting inaccuracy and deficits identified

Teaching based on standard, well-developed materials which incorporate visual images

- NHF Heart Attack Warning Signs figure for symptom knowledge and action
- Nitrate information sheet from You and Your Heart booklet

Tested at cardiac rehabilitation exit at 6-8 weeks

Gallagher et al., 2010
Patients’ knowledge of heart attack warning signs pre and post intervention

- Pain*
- Tightness*
- Pressure*
- Heaviness*
- Chest location
- Arms location*
- Jaw location*
- Neck location*
- Shoulders location*
- Back location
- Shortness of breath*
- Cold & sweaty*
- Nausea
- Dizziness*

* P < .05
Actions in response to heart attack symptoms pre and post intervention

<table>
<thead>
<tr>
<th>Action</th>
<th>Pre</th>
<th>Post</th>
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<tbody>
<tr>
<td>Stop what I am doing and rest*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tell some nearby about my symptoms*</td>
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<tr>
<td>Monitor if my symptoms are worsening*</td>
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<tr>
<td>Monitor how long my symptoms are lasting*</td>
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<tr>
<td>Use my angina spray/tablets*</td>
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<td>Call 000 and ask for an ambulance*</td>
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<tr>
<td>Ring my local doctor</td>
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<tr>
<td>Get someone to drive my to hospital*</td>
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<tr>
<td>Drive myself to hospital</td>
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</tbody>
</table>

* P < .05

Role of assessment in motivating Patient to learn
HEALTH LITERACY SCREENING – Let’s try it!

NEWEST VITAL SIGN (example items)

› If you eat the entire container how many calories will you eat?

› If you are allowed to eat 60 grams of carbohydrates as a snack, how much ice cream could you have?

› Your doctor advises you to reduce the amount of saturated fat in your diet. You usually have 42 g of saturated fat each day, which includes one serving of ice cream. If you stopped eating ice cream, how many grams of saturated fat would you be consuming each day?

› If you were allergic to penicillin and peanuts is it safe for you to eat this ice cream?

Pfizer 2014
REALM-SF

Request the patient to read out loud the following words or say blank if unsure. If taking longer than 5 seconds then ask them to read only the ones they know:

› Menopause
› Antibiotics
› Exercise
› Jaundice
› Rectal
› Anemia
› Behavior

Baker et al, 1999
Universal precautions approach
- assume low health literacy

5 STEPS TO BETTER HEALTH LITERACY
- Speak slowly
- Teach back
- Encourage questions
- Plain language
- Show examples
Atrial fibrillation is one of a number of disorders commonly referred to as 'arrhythmias', where your heart does not beat normally.

Atrial fibrillation is caused by a disturbance of your heart's electrical system. The problem starts in the upper chambers of your heart (the atria) and causes these chambers to quiver (or 'fibrillate'), rather than beat normally. This can mean that your heart does not pump blood around your body as efficiently as it should.

An arrhythmia is a problem with the speed or rhythm of the heartbeat. Atrial fibrillation (AF) is the most common type of arrhythmia. The cause is a disorder in the heart's electrical system.

Often, people who have AF may not even feel symptoms. But you may feel

- Palpitations -- an abnormal rapid heartbeat; Shortness of breath; Weakness or difficulty exercising; Chest pain; Dizziness or fainting; Fatigue; Confusion
Coughing at night

Swollen stomach

Can’t lie down to sleep
Move more, sit less

Jim walks to see his family around the corner each day. When Jim is well, he can easily walk the 15 minutes there and back from his family. When he can’t manage the walk, he knows it is time to go to the clinic and talk to the nurse, doctor or health worker.
HEALTH LITERACY

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References and Resources

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