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Technique Adaptions for Different Client Presentations

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Monash BreastScreen

Monash Health

Looking at variations in approach to imaging different client presentations ? ….

Current practices across states –noted very similar overall

Considerations for small/Implant/larger breast/body

What I consider real challenges for tomorrow

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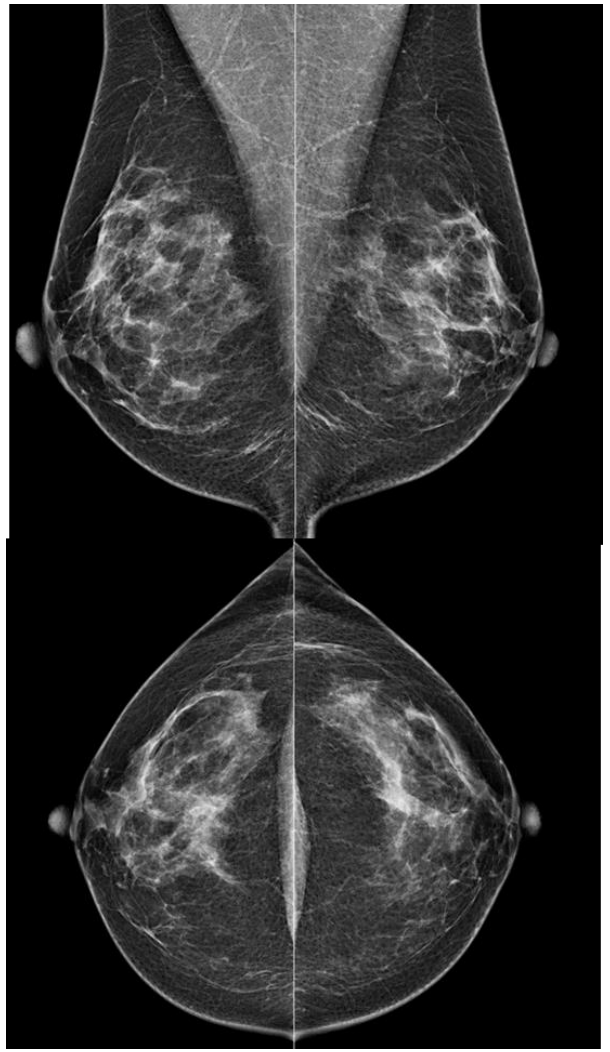
Yesterday and tomorrow ….



Core radiographic skills of positioning and communication

1. Manually positioning and tailoring to the anatomical presentations to obtain high quality images to allow best opportunity of cancer detection

2. Communicating, both verbal and non-verbal for a safe workflow/practice , optimal imaging and client experience

Image Quality

Influenced by

- Equipment
- Radiographer expertise
- Client anatomical presentation & cooperation

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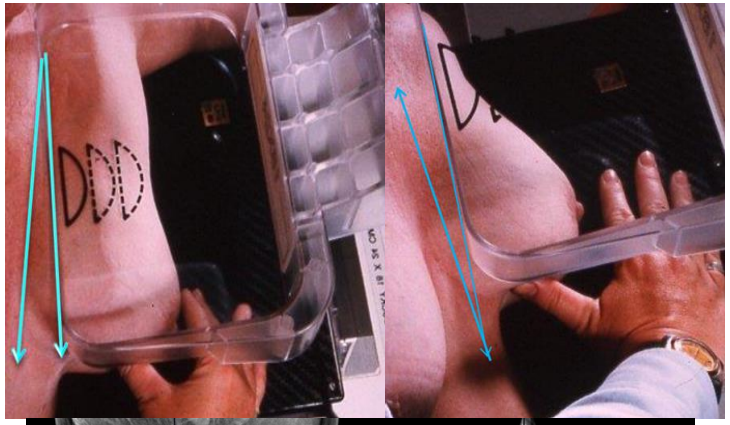
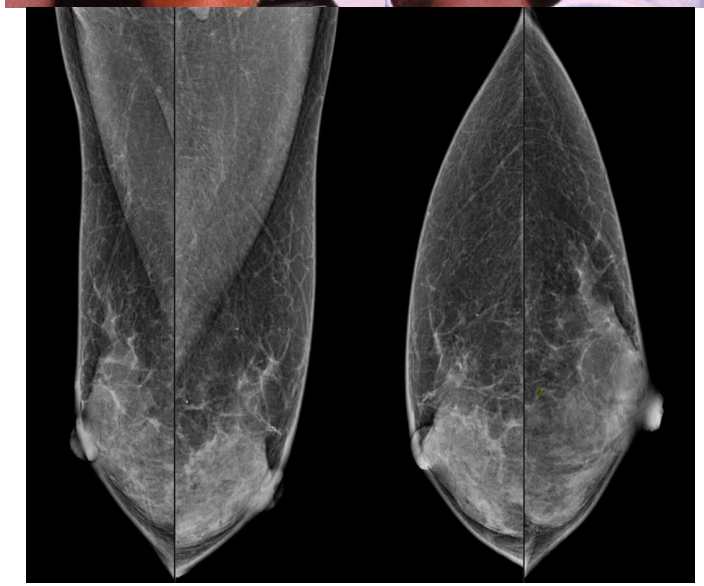
Imaging smaller breasts

AEC selection covers most breast tissue and exposure managed well

- Technique exposure factors – may adjust KV or select Mo/Mo to increase contrast

  - Closer to unit , straight onto unit
  - Use of small narrow paddles
  - Turning torso so breast mound placed centrally
  - If very minimal do MLO first and use exposure as manual for CC
  - ‘Hi there’ hand up so shoulder rotated out of pic
  - Expiration
  - Possibly reverse CC view on rare occasions





Possibly need upper and lower emphasis views to demonstrate tissue esp if R1

Poland Syndrome

It will be likely that at some point see cases where there is a breast with no /minimal pec and underdeveloped

- Incidence is ~ 1 in 20,000 - 50,000 live births
- Congenital, cause unknown
- Familial occurrence has been observed but not hereditary
- Variety of reconstruction options, may appear just underdeveloped
- Males 3 x more likely affected than women
- Affects right side 2-3 times more than left

Implants – protocols

Standard 4 view: 2 implant in-view, 2 displaced

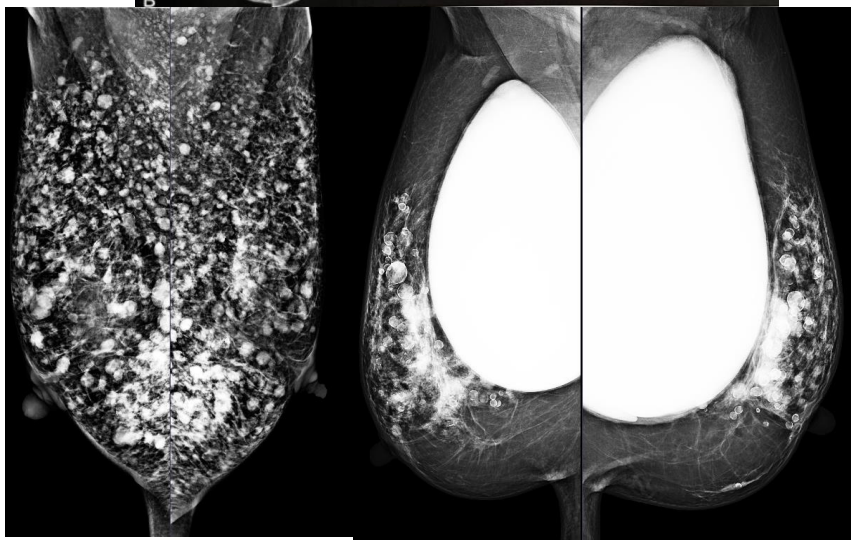
3 views with minimal compression if unable to perform displacement views.

Couple of states do not include lateral view if displacement not possible.

Compression

Direct Si Injections - agreement not suitable for screening program. 2 approaches

- images taken as normal, contacted and discharged with advice
- stop after 1-2 images and explain need to discuss. Clients are contacted and referred back to GP



Top implant views, Breast Imaging,Ikeda and Miyake 2017
Si Injection views below, BSV

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Challenges imaging clients with large breasts or body habitus

Growing numbers of Australians living with obesity or being overweight

~ 73% of women of screening age in 2017-18 (AIHW 2023) : 1980s ~ 27%

Obesity well established risk factor for postmenopausal breast cancer and associated with poorer outcomes.

Lower participation rates across screening programs

“Targeted health promotion on increased breast cancer risk in obese women is required as is a need to address body image issues and encourage screening participation “

McBride et al. 2019. Double Discourse Qualitative perspectives on Breast Screening participation among obese women and their health care providers Int J Environ. Res. Public Health McBride et al. 2019 , 16,534.

Challenges imaging clients with large breasts or body habitus

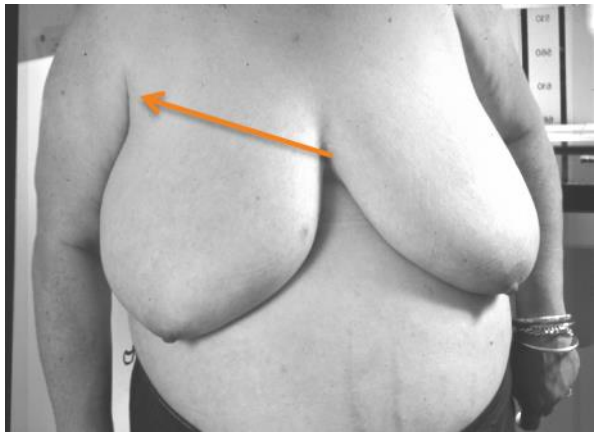
Challenges experienced in positioning

- Some variances across country with 2 rads option across states
- some have bariatric chairs /walkers available

  Adjustable height chair up to 160-250kg to assist
- Ability to identify for extended appointment times and if 2 rads required
- Staff ergonomics – risk wrist /hand /shoulder

Challenges imaging clients larger body habitus +/- larger breasts

- Anatomical presentation /Body habitus
- Large abdomen –large /small breasts
- Fragile skin IMA - more prone to splitting
- Limited flexibility
- Excess tissue - arms
- Folds /creases
- Weight of breast tissue
- 2 Radiographers required?
- Breath hold ?expiration



ARROW DEMONSTRATES ANGLE OF PECTORAL MUSCLE

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Technical considerations

- Lower angle 30-40
- Safe ergonomic practice
- Review previous images, where possible
- CC - consider extended CC view for wrap around breast
- Extra nipple views as per local protocol
- Consider SIO to remove arm or open ima
- Maintaining anatomical position not rolling tissue

Site considerations

- Gown size(s)/own top
- Are there higher wider seats – for larger and arthritic clients ?
- Know max table/equipment weights standard ~135kg /160kg
- Use of bariatric walker
- Biopsy wide chair
- Cubicle sizes –if small can they change in rooms

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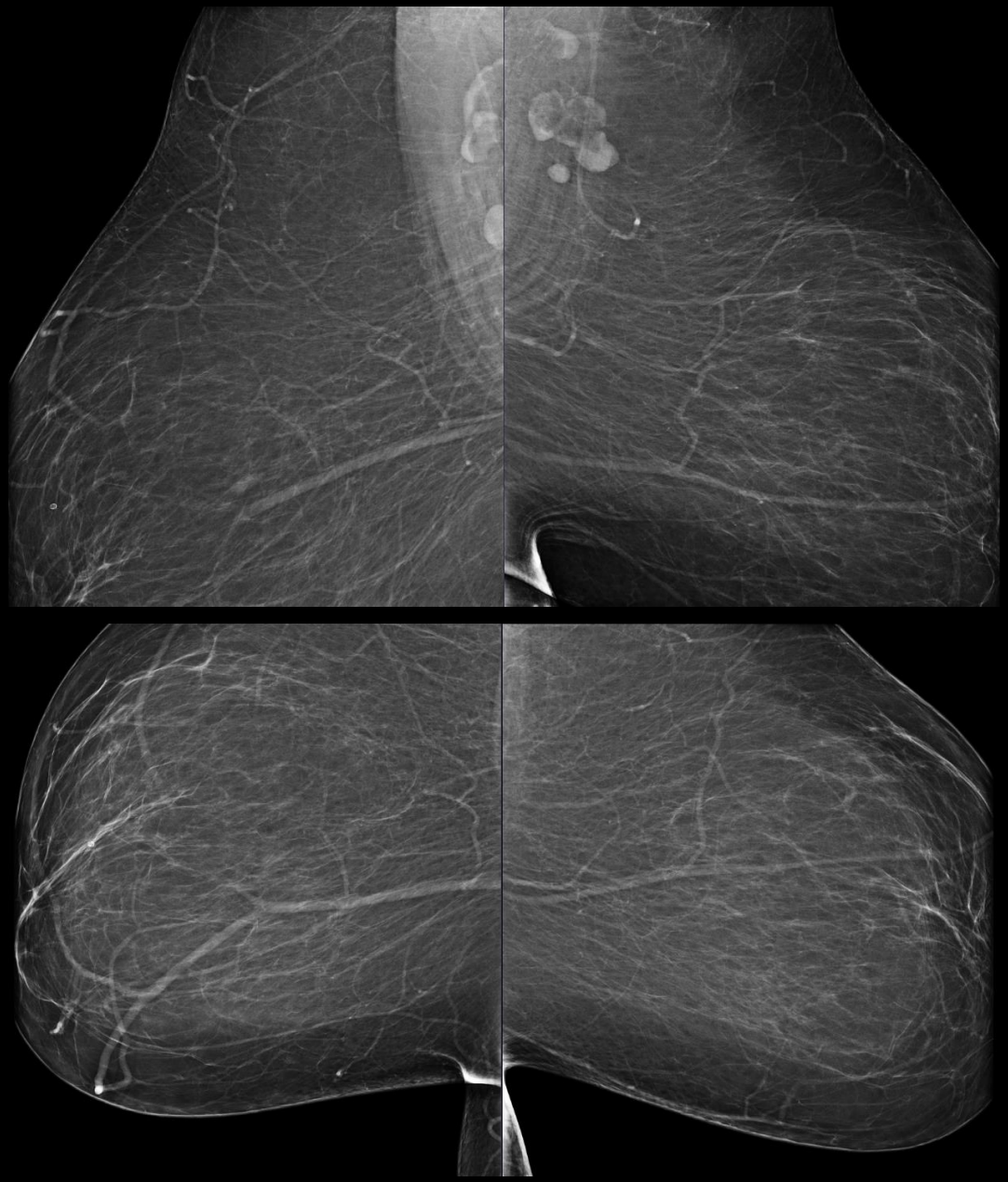
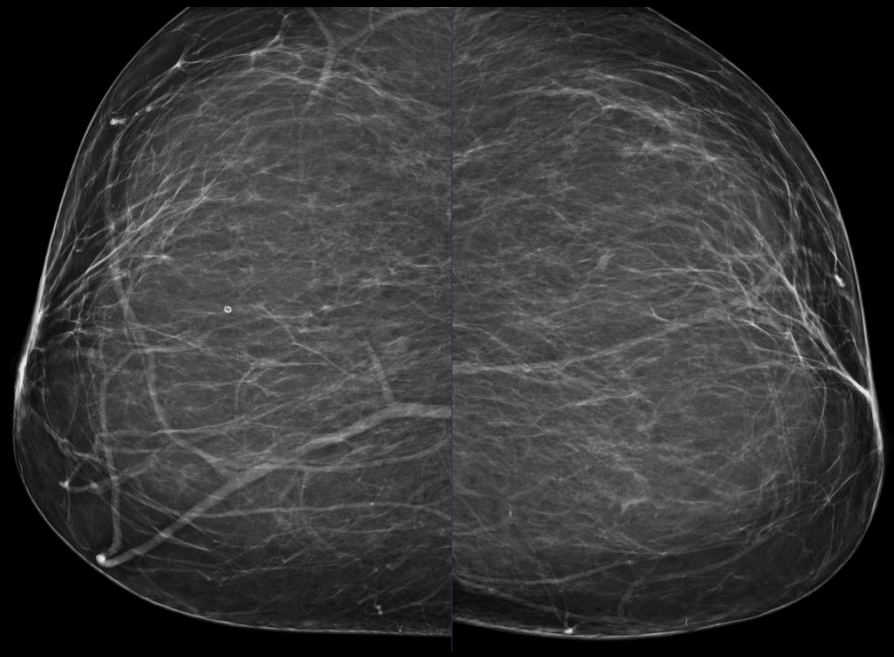


V wide shoulders and solid build –square
Wide bulky to position
OH&S issue needed 2 radiographers



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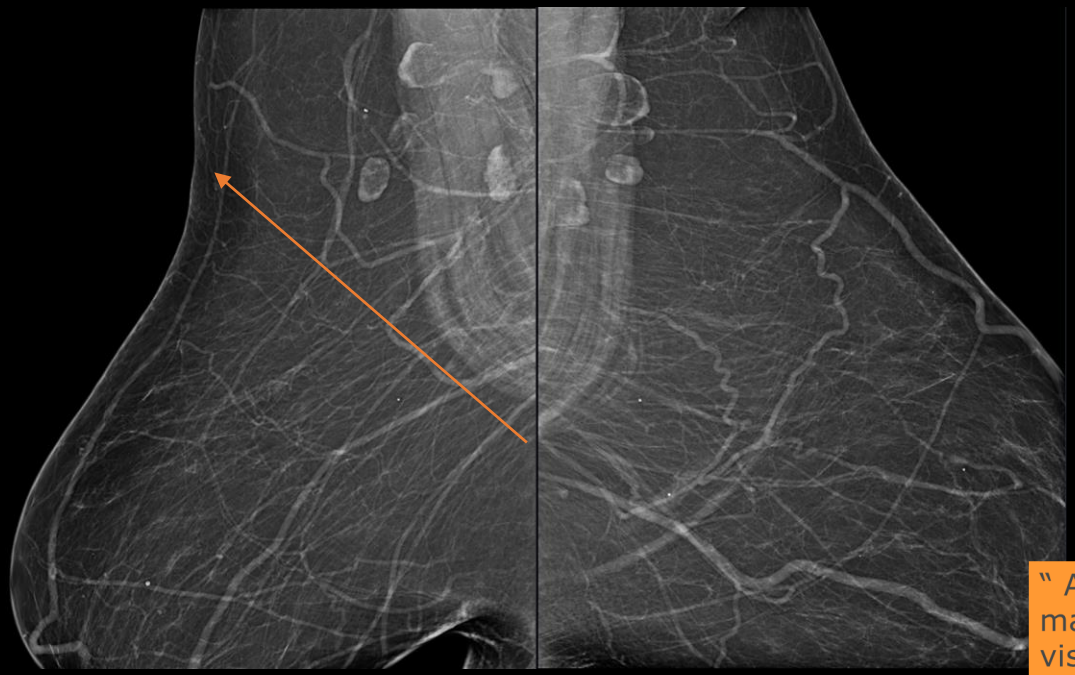

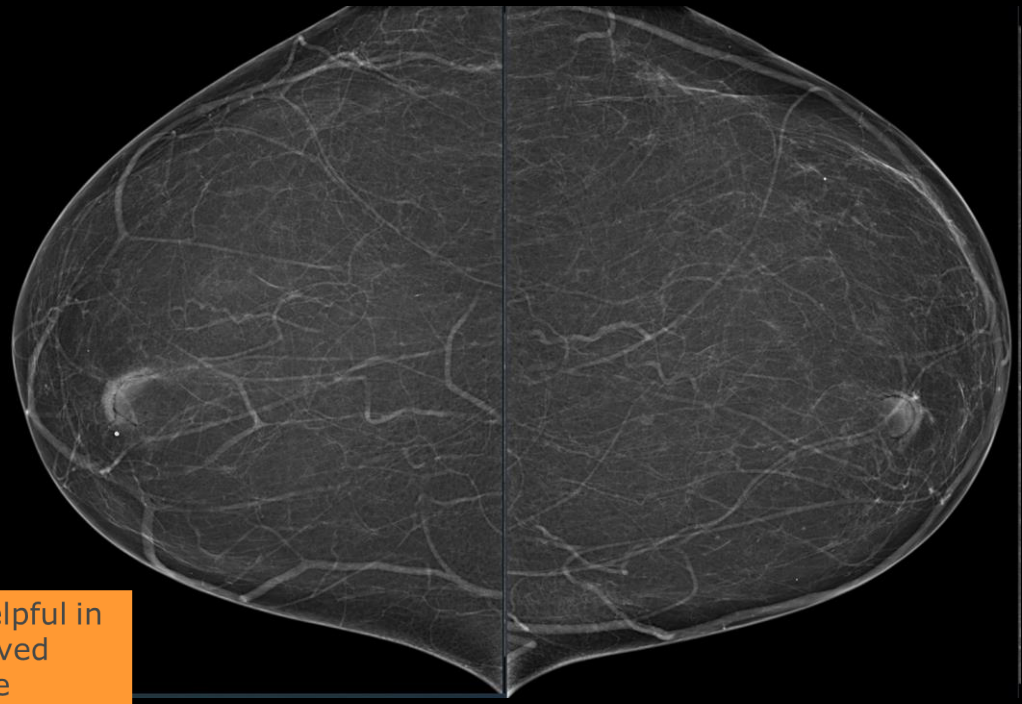

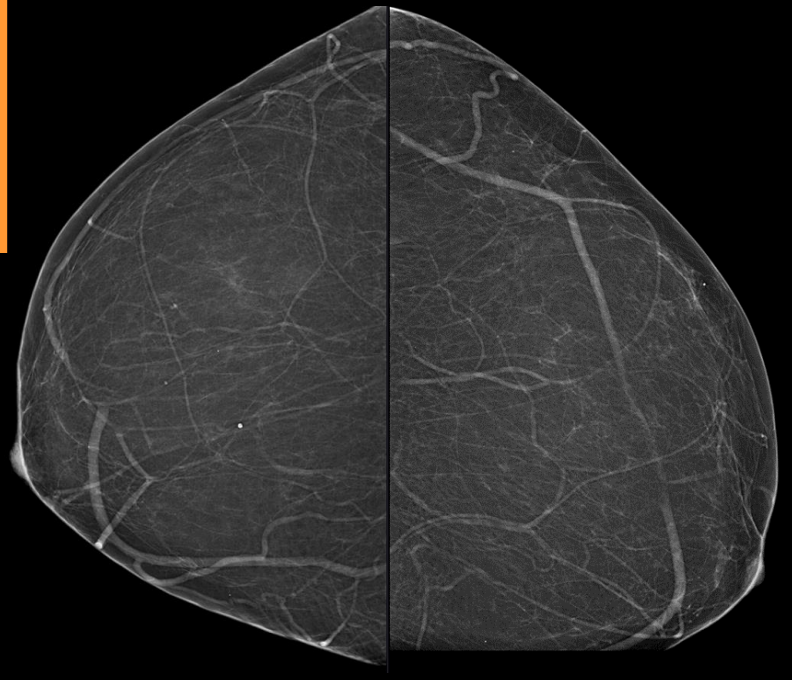

" Although fat appears to be helpful in mammography, with the improved visibility of lesion relative to the surrounding fat, studies have shown that increased BMI is associated with decreased geometric sharpness, decreased image contrast, and higher potential for loss of sharpness because of motion."

R Uppot et al 2007

Challenges for tomorrow

1. Clients living with obesity/ overweight

Increased extra time /2 radiographer appointments
Increased need for adequate accessory equipment
Training to support understanding of complex reasons for living with obesity etc
Projects to look at improving participation

BreastScreenPlus project in WA –current
Training and information strategies developed
Staff/consumers and screening participants with aim for improved participation

1. More funding required if one client is needing 2 rads and taking 2 appt slots or more
2. More availability of accessory equipment and appropriate chairs
3. BreastScreen services endeavor to remove and minimise barriers to attending for those people with ‘ protected characteristics’

Challenges for tomorrow

2 Client interactions and expectations

Social anxiety and interactions.

Globally healthy populations have reported negative mental health outcomes following the COVID 19 outbreak

“ …, elevated levels of anxiety, stress, depression, somatic symptoms, and poor sleep quality”

“ with women and low-income earners being especially vulnerable.”

Lots of contributing factors.

The Influence of the COVID-19 Pandemic on Social Anxiety: A Systematic Review. R Kindred & G W Bates, Int. J. Environ. Res. Public Health 2023, 20, 2362

Anecdotally tolerance and peoples ability to control or regulate their reactions and responses seems to have decreased

Challenges for tomorrow

Morning forecast:

Slightly exhausted with 100% chance of needing coffee. Scattered sarcastic comments through the afternoon.

2 Client interactions and expectations

Increase in complaints by staff of clients at screening and of complaints re seemingly small events /misunderstandings

In community increase in abuse and threatening behaviours-healthworkers and paramedics, aircraft crew, supermarkets everywhere

Increasing levels of domestic violence and sexual abuse reported

Training sessions to inform and support staff re these matters and how to respond /report

Support processes to debrief or discuss cases-emotionally draining

Characteristics of radiographer in mammography

"When asking radiography teachers/mentors about the characteristics of a radiographer who works in the field of mammography, they emphasized **the need to be calm, confident, communicative and supportive, as well as paying attention to detail. To work well with patients/women means not to force, but guide, to talk, sometimes with authority, but always with empathy and understanding ….. "**

Challenges in mammography education and training today: The perspectives of radiography teachers/mentors and students in five European countries. B. Strøm et al. Radiography 24, 2018

Looking to Tomorrow

Reflect and refocus, if needed, strive always for best you can do and keep getting better.

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