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Linking the Science – Innovations in Nursing Treatment and Care

Moses Shongwe Barts Health NHS Trust



Session plan

• What is science?

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- Innovation to learn from
- Scientific highlights in HIV care
- Long acting injectables in HIV care
 - Operational challenges
- Other long acting technologies
- HIV Treatment and care challenges

Science

- the intellectual and practical activity encompassing the systematic study of the structure and behaviour of the physical and natural world through observation and experiment.
- the pursuit and application of knowledge and understanding of the natural and social world following a systematic methodology based on evidence.

https://sciencecouncil.org



Innovations: Use of LA injections in Chronic Schizophrenia

- Patient relapsed after 5 years due to poor adherence associated with hospitalisation and suicide
- Discontinuation rate for oral psychotics was 26 44%
- Longer acting injectable treatment is associated with lowering relapse .
- Improved quality of life reported with less frequent injections.
 - Kaplan et al, Patient Preference and adherence; 2013

Other examples of innovations

Osteoporosis

- Adherence is low and decreases in general over time
- Patient overwhelmingly prefer a once-yearly injectable product iv zelondronic acid
- Suitable for people with cognitive dysfunction, polypharmacy, physical limitation.
 - Fobelo Lorano et al, Eur J Hosp Pharm; 2017

Gonadal disorders

- Gonadotropin releasing hormone agonists are small peptides that widely used for treatment of prostate cancer, breast cancer, endometriosis etc
- Bioerodable implants are used, preformed and injected subcutaneously as a small rod or mixed as a liquid that hardens after injection.
- Dissolves over 12 months releasing the drug.
- Safety and tolerability of these implant system in human generally excellent.

Innovation in HIV Treatment and care

 As the decade progressed, scientific breakthroughs and medical innovations helped bring radical change in the outlook for people living with HIV. In 1996, the development of highly active antiretroviral therapy (HAART) marked the first time that people living with HIV had hope for effective treatment.



Some of the HIV care scientific highlights

- Dual therapy as first or second line treatment
- Implementations of 6 12 monthly prescriptions
- Cost effectiveness of community-based supports
- Effective hepatitis C treatment amongst people co-infected
- 4th 90 (quality of life)
- Integration of services with other care services
- Service designed to support transgender populations
- Better understanding of HIV drug resistance and drug-drug interactions.
- Women's health and HIV; Annual health reviews
- Women's involvement in research and marginalised populations

Why Long Acting Injectables

- Confidence in 100% adherence
- Bioavailability ~100%
- Viral load monitoring
- Less frequent dosing
- Less adverse events
- HIV related stigma reduction

Challenges for LA Injectables

- Injection volume
- Need for oral leading
- Managing missed doses
- Drug resistance

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- Management of drug-drug interaction
- Other gaps: pregnancy, breastfeeding, children, people with suboptimal adherence to HIV treatment

Operational challenges for LA Injectables

- Capacity and staffing to support
 - Patient reminders
 - Missed appointment follow up
 - scheduling
- Drug storage and inventory management
- Patient flow
- Migrants, mobile populations, language barriers
- Cold-chain storage for rilpivirine
- Cost effectiveness
- Injection fatigue
- Alternative sites
- Oral Bridging options, supply and waste
- Where and who to administer: community, hospital and patients home and self

Ibalizumab (IV infusion)

- Entry inhibitors including Fostemsavir (oral)
- People with limited treatment options
- 2 weekly infusion
- Part of homecare package



Lenacapavir (S/C injection)

- Capsid inhibitor
- 6 monthly s/c injection
- Barrier to resistance is medium to high
- Use it carefully

HIV Treatment and care challenges

- Ageing with HIV and multimorbility
- Polypharmacy, unrecorded recreational/herbals/ over counter medications
- Management of Opportunistic infections, STI, vaccinations
- Management of co-infections (TB, cancer, HCV, etc)
- Need to find patients and poor adherence
- Deprivation, stigma, discrimination, mental health, U=U
- HIV drug resistance and interactions
- Pregnancy, breastfeeding, trans health and adolescent transition

• Prof Orkin from: DHHS ART Guidelines. Living with HIV. December2019



Who is best placed to manage HIV treatment and care and why?

- Specialists clinicians
- Specialists nurses (nurse practitioners, clinical nurse specialists)
- Specialist healthcare allied workers
- General practitioners
- Home care teams and community hubs
- Patient dispensing units (South Africa)
- Patients, Peer mentors, NGO

Lesson learnt to HIV treatment and prevention

- Acknowledge historical and social context of healthcare visits
- Acknowledge individuals' lived experience
- Eliminate barriers to access
- What long methods are: highly effective, long term reversible etc.
- Make methods readily available
- Respect peoples decisions
- Maintain focus on whether the method meets the individual needs
 - Gubrium, AJPH, 2016; ROSS & Sollinger, 2017

Summary: linking the science

- Create and control the environment
- Engagement
- Feedback from providers and receivers
- Feedback should provide evidence, relevance, consequence and action
- Communicating and announcing
- Self discipline and control
- Education and training, more research