



## INNOVATING VACCINE PRODUCTION TO MEET THE CHALLENGE OF COVID-19

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**Aim:** To examine the role of Pharmacy workforce capabilities and existing policies for maintaining safety and quality control for mass production of COVID-19 vaccinations.

**Method:** State and Territory pandemic plans were examined, with production modelling undertaken. COVID-19 Vaccine production was assessed utilising Digital Analytics Queensland COVID Vaccine Management System. Data was recorded for submission to the Commonwealth Government:

- Vaccine stock whole vials
- Vaccine stock prefilled syringes
- Batch expiry date
- Doses administered
- Dose wastage

Acknowledgements:

1. RBWH COVID-19 Vaccination Clinic
2. RBWH/MN Emergency Operations Centre
3. RBWH Infectious Diseases Department
4. RBWH Infection Management and Prevention Services
5. Digital Metro North - Queensland COVID Management System

### Results:

#### Dual Vaccine Hub

- Surge Capacity Modelling – Supply and Demand
- COVID-19 Production Talent Pool staffing deployed
- Rapid Access Vaccination of Hospital Staff
- Accessible to Community

#### Local Manufacture

- Reduction of logistical constraints
- Low dead space needles for manufacture
- Maximised dose production
- Balance speed of supply for herd immunity

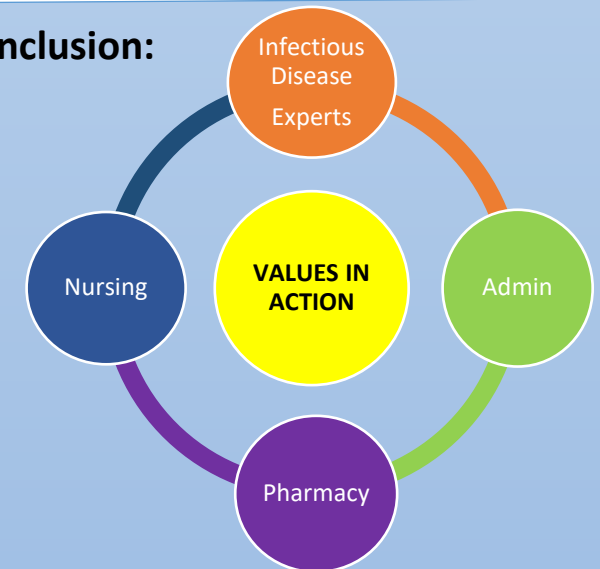
#### Safety and Quality Control

- Adherence to production workflows
- Accountability of dilution times
- Independent reconciliation process
- **1.04% wastage events**
- **0% dispensing errors** associated with Riskman reporting since inception

References:

Australian Product Information BNT162b2 [mRNA] COVID-19 vaccine – Therapeutic Goods Authority. <https://www.tga.gov.au/covid-19-vaccine-pfizer-australia-comirnaty-bnt162b2-mrna>  
Queensland Health COVID-19 Comirnaty Vaccine (Pfizer/BioNTech) [https://www.health.qld.gov.au/data/assets/pdf\\_file/0017/1027511/covid-19-comirnaty-vaccine-protocol.pdf](https://www.health.qld.gov.au/data/assets/pdf_file/0017/1027511/covid-19-comirnaty-vaccine-protocol.pdf)  
QCVMS Training and Reference Materials – Queensland COVID-19 Vaccine Management Solution <https://qheps.health.qld.gov.au/ehealth/qcvms-training-and-reference-materials-queensland-covid-19-vaccination-management-solution>  
Pfizer COVID-19 vaccine: dilution of multidose vials and preparation of 0.3ml dose syringes <https://www.health.nsw.gov.au/Infectious/covid-19/vaccine/Pages/vaccine-management-refrigerator-admin.aspx>  
Process: managing both COVID-19 vaccines at the same site. <https://www.health.nsw.gov.au/Infectious/covid-19/vaccine/Documents/vaccines-same-site.pdf>

### Conclusion:



- The robust pandemic response has seen multidisciplinary teams work in parallel to apply innovative thinking to mass vaccination production.
- **Pharmacy staff play a key role** in maintaining safe and effective management of COVID-19 vaccine procurement, storage, transport, distribution and preparation within the COVID-19 Vaccine Hub.