

## **Describing client presentations at four syringe dispensing machines in South-East Melbourne, Australia.**

### **Authors:**

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**Background:** Needle and Syringe programs (NSPs) play an important role in curtailing disease transmission among people who inject drugs (PWID). Syringe dispensing machines (SDMs) have the potential to reach PWID who may be less likely to engage with fixed-site NSP services. Point-of-access SDM data collection provides insights into utilisation and characteristics of PWID accessing SDMs. This informs service evaluation and adaptation to ensure responsive health care provision.

**Methods:** We explored and compared data collected from four SDMs and one fixed-site NSP in Melbourne, Australia (May 2017-December 2020). Prior to ordering injecting equipment, clients enter basic demographic data (i.e., age category, gender, and postcode) into the SDM. Descriptive analysis reports SDM utilisation and client demographics. Interrupted time-series analysis assessed changes in SDM use following COVID-related lockdowns.

**Results:** From 180,989 SDM presentations, we estimated 90,488 'unique' SDM presentations. Sixty-nine percent of SDM presentations occurred out of NSP operation hours, with little variation across days of the week. Among truncated data (n=31,868), a greater number of SDM clients were female and non-binary compared to the fixed-site NSP. SDM clients reported younger ages than NSP fixed-site clients, with 20.5% reporting an age  $\leq 20$  years. Clients reporting non-binary gender were majority <20 years (56.5%). Time-series analysis showed a significant decline in SDM presentations during COVID-lockdown periods, but no significant trend for NSP fixed-site presentations.

**Conclusion:** Point-of-access SDM data provides important guidance for harm reduction service delivery. Collecting demographic and time presentation data shows the need for varied NSP services for service responsiveness and to meet the needs of different clientele. However, there are important considerations related to the validity of collected demographic data, relevant to services looking to implement similar data collection systems. Compared to the fixed site NSP, demographic data suggested more women, non-binary people, and younger people, utilised the SDMs.

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