

# Drug Checking Services for People Who Use Drugs: A Systematic Review

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## Importance of this systematic review

- A harm reduction intervention operating for over fifty years, **drug checking services (DCS) provide people who use drugs (PWUD) with chemical analysis results of their drug samples** to facilitate more informed decision-making. By aggregating drug composition data, DCS can also monitor the unregulated drug market.
- Models of DCS differ globally and include mobile services at events, fixed services where samples can be dropped off or mailed, and the distribution of checking methods for personal use.
- Given the growing availability of DCS and interest in their impacts, we conducted a **systematic review to investigate the (a) influence of DCS on behaviour of PWUD** (including intended and actual behaviour), **(b) monitoring of drug markets by DCS, and (c) outcomes related to models of DCS** (including barriers and facilitators to use).

## How this systematic review was conducted

- Eligible studies were peer-reviewed journal articles or conference abstracts reporting original data and published in any language from January 1, 1990 to October 16, 2019. Grey literature reporting on the influence of DCS on behaviour of PWUD was also eligible.
- A systematic literature search was conducted in eight electronic databases, and grey literature was identified online and through contact with content experts. Reference lists of included studies were also searched.
- Two independent reviewers screened titles and abstracts, screened full-texts in duplicate, extracted data in duplicate, and assessed risk of bias in duplicate, using standardized, pilot-tested charting forms and with a senior author resolving conflicts. Risk of bias for quantitative peer-reviewed articles reporting on behaviour or models of DCS was assessed using National Institutes of Health tools. Narrative synthesis was used for data analysis.

## What this systemic review found

- This systematic review identified **90 studies** evaluating the impacts of DCS. Studies were overwhelmingly from Europe (72%) and used cross-sectional designs (88%).
- An emerging evidence base demonstrates that **DCS influence intended and actual behaviours of PWUD, particularly when results from DCS are unexpected or detect drugs of concern.**
- **Monitoring of drug markets by DCS is well established in Europe and increasingly in North America.** DCS provide data on the concordance between expected (i.e., anticipated by individuals accessing DCS) and detected contents in drug samples, as well as detect new psychoactive substances and drugs of concern (e.g., fentanyl and analogues, atropine, DOx, levamisole, P(M)MA).
- Concerns about drug contents and negative health consequences facilitate use of DCS; lack of concern, trust in drug sellers, lack of accessibility of DCS, and legal and privacy concerns are barriers to use.
- The 13 articles assessed for risk of bias were of relatively poor quality.
- While scholarship is growing, knowledge gaps persist. Further research on actual behaviours, linking behaviours to health outcomes, and among people who inject drugs or use opioids would add to the knowledge base, as would more rigorous and higher quality study designs.

## For more information, refer to the systematic review published in *Addiction*:

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