5. Co-location of Medical and Dental Services

Co-location of medical and dental providers encompasses both shared physical facilities as well as organized systems of care that employ medical and dental personnel at multiple sites. Co-location facilitates integration by allowing for coordination of services within comprehensive systems of care.

Environmental Scan of Publications

Nine examples of co-location were noted in this environmental scan (**Table 11**); these programs are also discussed in sections of this report relevant to the risk factor or chronic disease targets of each.

Table 11. Co-location of Medical and Dental Services

Program	State	Brief description
Blackstone Valley CHC	RI	All dental patients are also required to be primary care medical patients at the clinic
Marshfield Clinic	WI	Bidirectional referrals across multiple sites facilitated by shared EHR
Hamilton Health Center	PA	Free health care, including dental, for patients with diabetes
Neighborcare Health	WA	Bidirectional referrals between medical and dental providers; referrals are ordered in the EHR
Salud Family Health Center	KS	Dental hygienists are embedded in the medical clinic; dental providers also test blood sugar on patients with diabetes
Terry Reilly Health Services	ID	Five dental clinics and seven medical/behavioral health clinics; EHR prompts medical staff to make referrals to the dental clinic
Trillium Coordinated Care Organization	OR	Coordinated care organization (CCO) that contracts with four local Medicaid dental plans to coordinate dental and medical care
United Community and Family Services	CA	Children are seen by a dental hygienist during periodic well visits in the pediatric primary care clinic
Yakima Valley Farm Workers Clinic	OR, WA	EHR generates automatic referrals for dental care; dental outreach coordinator facilitates referrals and arranges follow-ups

Program Settings and Scope

At **Blackstone Valley Community Health Care** (BVCHC) (Pawtucket, RI), all dental patients are also required to be primary care medical patients at the clinic.[46] BVCHC views this requirement as crucial for development of a comprehensive health home. Primary care providers perform oral examinations and refer patients for annual dental care. Dental staff at BVCHC have participated in a field study to screen patients for diabetes risk and refer patients at elevated risk for primary care.

The **Marshfield Clinic**, in partnership with Family Health Center of Marshfield, Inc, is one of the largest private group medical practices in Wisconsin.[65] With multiple locations, the Marshfield Clinic offers medical-dental integration via bidirectional referrals, facilitated by a shared EHR.[15] Marshfield also provides cross-disciplinary case management for patients with diabetes. Oral health services are recommended by primary care providers based on routine visual oral examination and clinical decision support tools. Pilot projects are also testing routine monitoring of blood sugar of patients with diabetes who are seen in the dental office.

Hamilton Health Center (Pennsylvania) participated in a pilot study—the Diabetes Healthy Outcomes Project—to provide free health care for uninsured patients with diabetes.[66] This two-year program received funding from the Highmark Foundation and offered multidisciplinary services, including prescription drugs, eye care services, dental care, podiatry services, nutrition services, an exercise program, and diabetes education. Among the 189 participants, the proportion of patients with controlled diabetes was lower at the end of the program than at study start (28% vs. 38%). The investigators speculated that addressing other barriers to care, including transportation and lack of

social support, may be necessary to improve outcomes.

With five dental sites serving 18 primary care locations, **Neighborcare Health** (Seattle, WA) has limited its dental services to existing patients within their medical clinics.[15] The oral health program at Neighborcare focuses on special populations: high-risk children, pregnant women, HIV patients, and patients with diabetes. For patients with diabetes, bidirectional referrals between primary care and dental care can be initiated in the shared EHR system. Three of the dental sites are co-located with medical facilities and expanded function assistants apply sealants and fluoride varnish, and also place restorations.

Medical and dental services are co-located at **Salud Family Health Center's** 10 sites (Fort Lupton, CO). Salud embeds dental hygienists in the medical clinics, where they are able to provide screenings and preventive services, including fluoride varnish.[58] Although current efforts emphasize oral health screenings for pediatric patients, the hygienists also focus on patients with diabetes (key informant interview, September 8, 2017). Future efforts are planned to specifically target and provide dental care to patients with diabetes in order to help control blood sugar. In addition to these activities in the medical setting, dental providers also test blood sugar levels on all patients with diabetes.

The **United Community and Family Services** organization in California implements bidirectional referrals for patients with diabetes and other chronic conditions.[46] Care is coordinated across the FQHC system comprising three primary care practices, five behavioral health practices, and one dental clinic. In one example of integration, a dental hygienist provides screenings to 1-3 year olds during routine well-child visits at the pediatric primary care clinic.

Trillium Coordinated Care Organization (Lane County, OR) was established in 2011 and serves over 90,000 Medicaid members.[67] Trillium is contracted with all four local dental plans to provide integrated care for Medicaid enrollees.

Conclusions

Co-location of services often refers to medical and dental providers located under one roof; alternately, it can encompass medical and dental providers working at separate facilities within a centrally managed system of care. In either model, shared EHRs facilitate bidirectional referrals and flagging records of dental patients who have chronic conditions.

Challenges

- Noted barriers to integrated care provided within the framework of co-location include limited buy-in from medical providers, funding for oral health preventive services performed in medical settings, and insurance payment for services.[15]
- Co-location requires substantial investments in infrastructure, such as shared EHRs, shared or commonly managed facilities, and a multidisciplinary workforce.

Recommendations

1) Create professional guidelines or toolkits for integrated activities, including bidirectional referrals, in order to reduce start-up barriers to implementation, improve provider confidence, and facilitate standardization.
2) Payment models that reimburse cross-disciplinary procedures can improve sustainability.
3) Cross-training of medical providers by their dental counterparts (and vice versa) can increase buy-in and contribute to standardization of protocols for disease management.