Clinic Design
from The Center for Health Design

Transforming Primary Care Environments Through Evidence-Based Design

Promising Practices in Safety-Net Clinic Design

Presented by The Center for Health Design
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Safety-Net Clinics: Between Today - 2015

- $10.5 Billion in facility construction, renovation, & expansion
- Rethink how clinics can:
  - Provide greater access to care
  - Better patient experiences
  - Improve organizational outcomes

Inform and educate

- Publications describe design strategies that are enabling safety-net clinics to support best practices as they grow and change
  - Designing Safety-Net Clinics for Innovative Care Delivery Models;
  - Designing Safety-Net Clinics for Flexibility; and
  - Designing Safety-Net Clinics for Cultural Sensitivity
- Based on literature reviews, interviews, & visits to exemplary health centers & clinics
- Reveal a variety of issues that impact:
  - Health care experiences
    - Patients, providers, & communities
  - Facility planning decisions
    - Health care interactions, patient flow, use of new technology, & changing needs of the community

Designing Culturally Sensitive Community Clinic Settings

Key definitions

- Culture
- Cultural sensitivity
- Cultural competence

Culture and healthcare interactions

- Models of health and disease
- Perception of hospitals, doctors, and other healers
- Hierarchical vs. egalitarian cultures
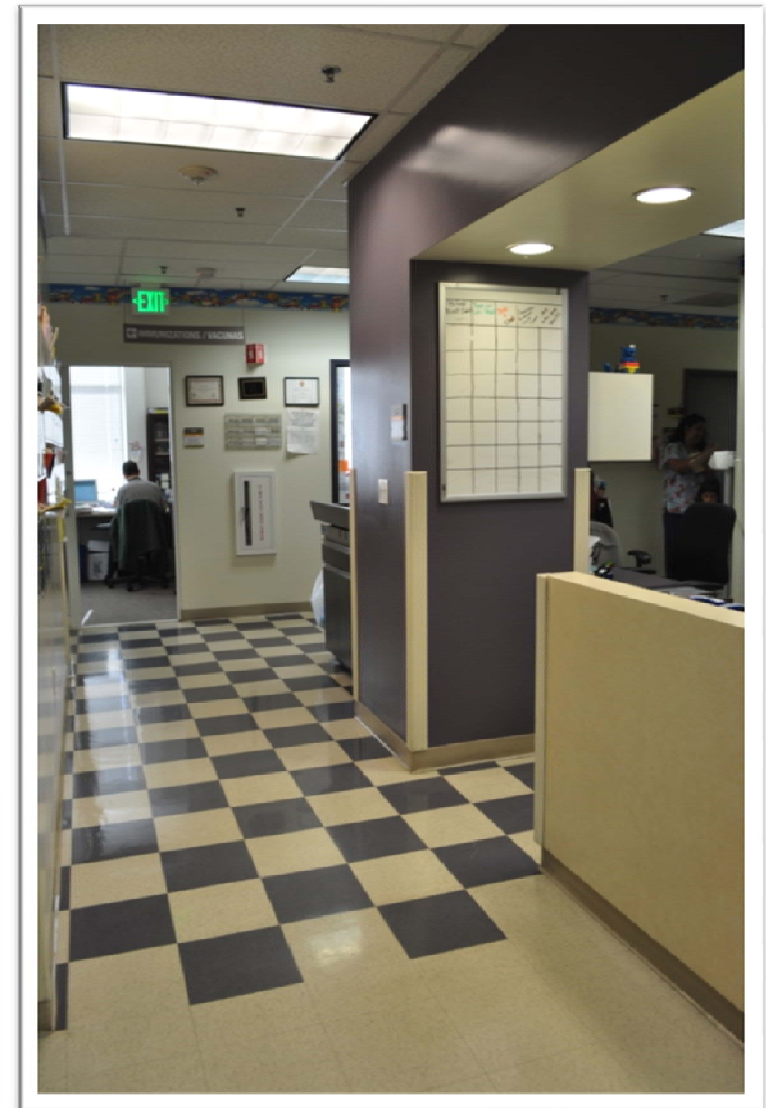- Family and social relationships
- Communication norms

Key design recommendations

- Signage, symbols and artwork to communicate meaning and empathy
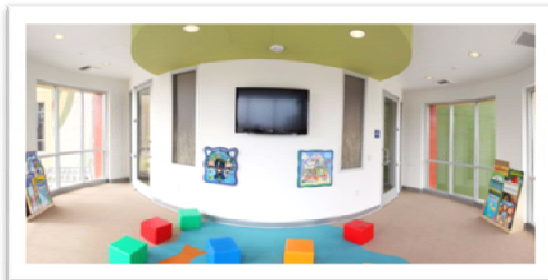- Provide spaces to support community activities
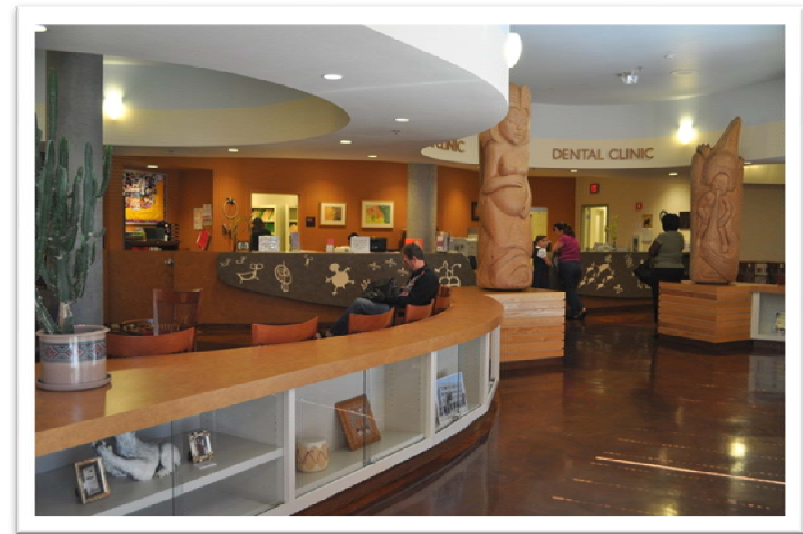
Key design recommendations

- Locate clinics for easy access
- Integrate with public transit
- Incorporate wayfinding strategies
    - Consider universal symbols

Key Design Recommendations

- Design waiting rooms and exam rooms to support involvement of families

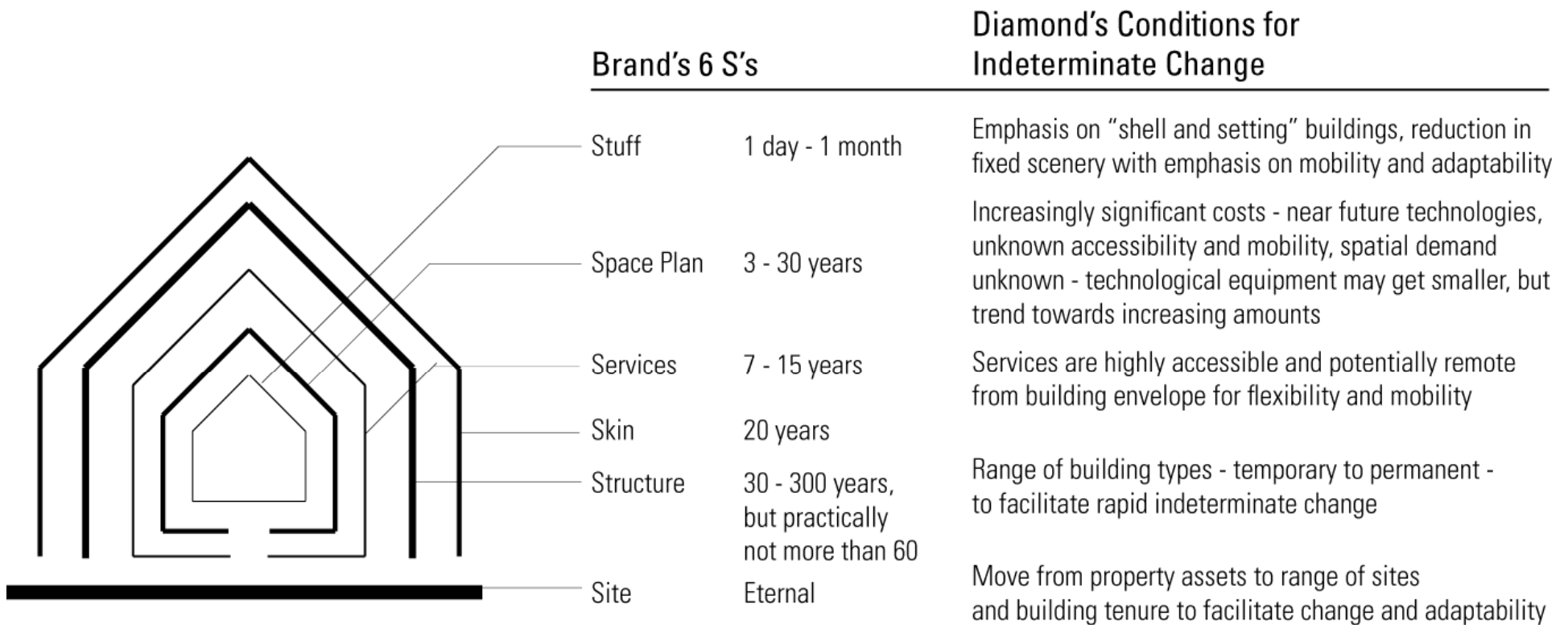# Designing for Flexibility and Adaptability

The importance of flexibility/adaptability

- Changes in:
  - Population
  - Services
  - Equipment
  - Technology
  - Care models

- Result in physical changes:
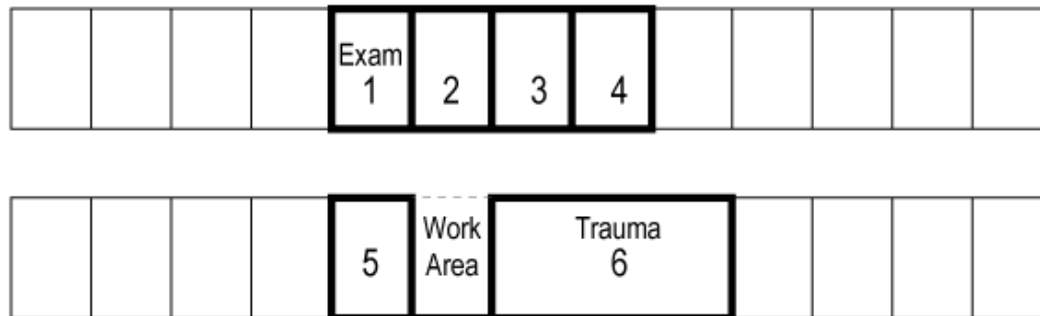 - Relocation of functions
  - Renovation
  - Expansion

Frameworks

- Learning buildings
- Open/ change-ready buildings

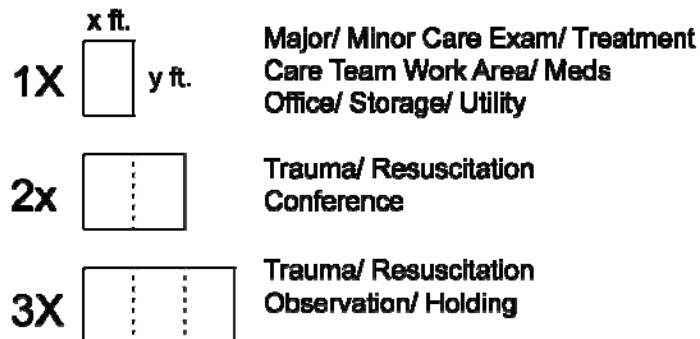| Brand's 6 S's		Diamond's Conditions for Indeterminate Change
Stuff	1 day - 1 month	Emphasis on "shell and setting" buildings, reduction in fixed scenery with emphasis on mobility and adaptability
Space Plan	3 - 30 years	Increasingly significant costs - near future technologies, unknown accessibility and mobility, spatial demand unknown - technological equipment may get smaller, but trend towards increasing amounts
Services	7 - 15 years	Services are highly accessible and potentially remote from building envelope for flexibility and mobility
Skin	20 years	
Structure	30 - 300 years, but practically not more than 60	Range of building types - temporary to permanent - to facilitate rapid indeterminate change
Site	Eternal	Move from property assets to range of sites and building tenure to facilitate change and adaptability

Adapted from Stewart Brand's representation of building layers (the 6 S's) and incorporating Soni Diamond's conditions for indeterminate change
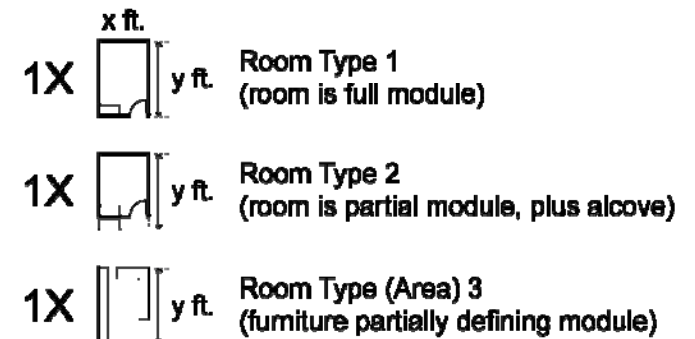
Universal Grids

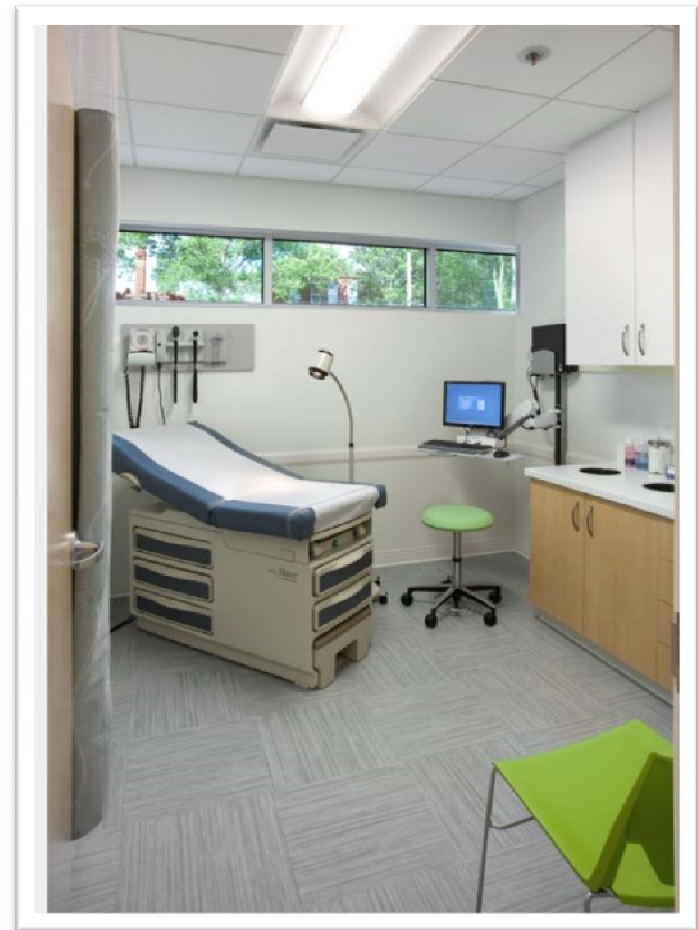## Sample Placement of Space Modules Within a Planning Grid

Emergency Department (ED) Example Space "Modules"

1X — x ft. / y ft. — Major/ Minor Care Exam/ Treatment Care Team Work Area/ Meds Office/ Storage/ Utility

2x — Trauma/ Resuscitation Conference

3X — Trauma/ Resuscitation Observation/ Holding

Example of Modular Dimension Relative to Net Dimension

1X — x ft. / y ft. — Room Type 1 (room is full module)

1X — y ft. — Room Type 2 (room is partial module, plus alcove)

1X — y ft. — Room Type (Area) 3 (furniture partially defining module)

Modular Systems / Flexible Technology

Herman Miller Furniture System, Grace Hill Water Tower Health Center, Arcturis

Visibility

Clinica Family Health Services, Boulder Associates

Universal Rooms - Pods

Clinica/People's Clinic in Boulder, CO , Boulder Associates

Incremental Growth

Buckner, Lee, and Dan Hightower. 2006. Universal Design for the Rural Environment.

The Business case

Manewa, A, et al. 2009. A Paradigm Shift Towards Whole Life Analysis in Adaptable Buildings.
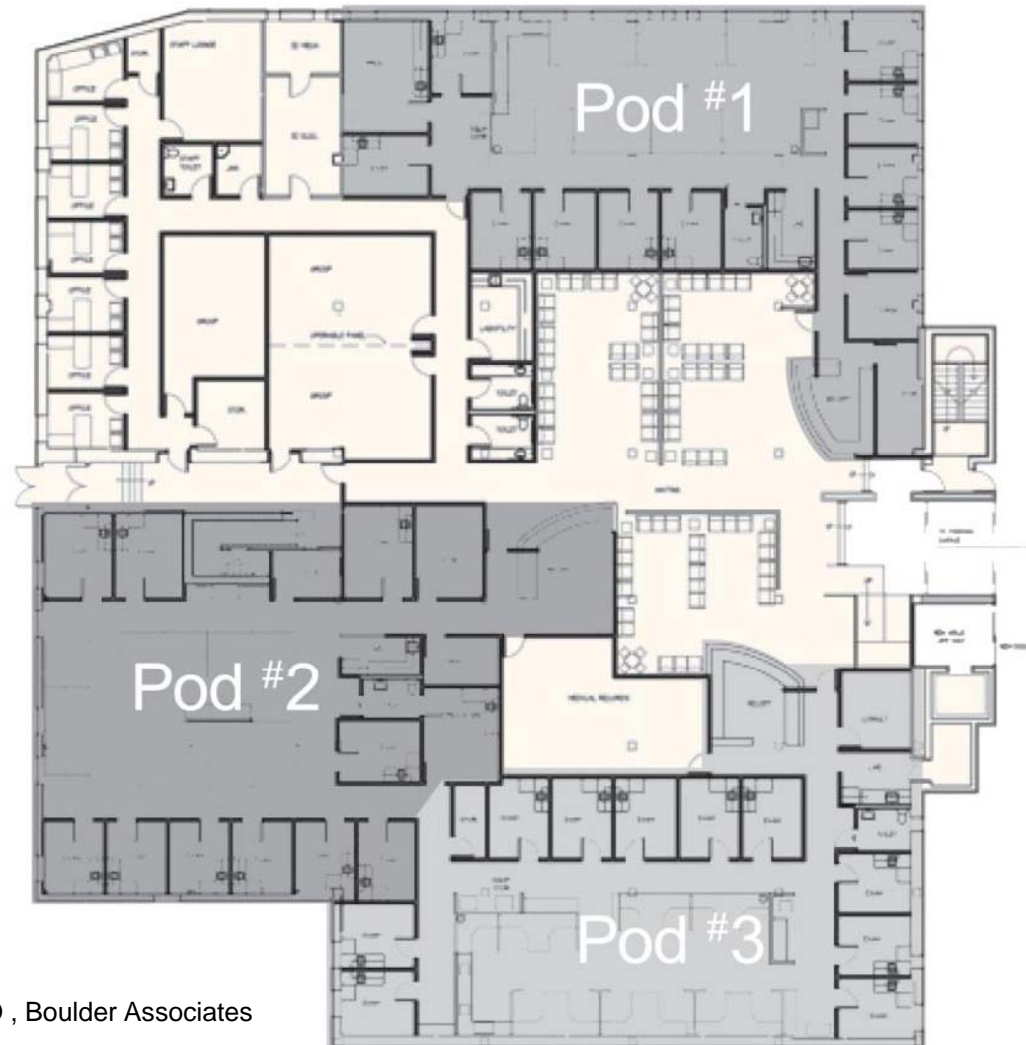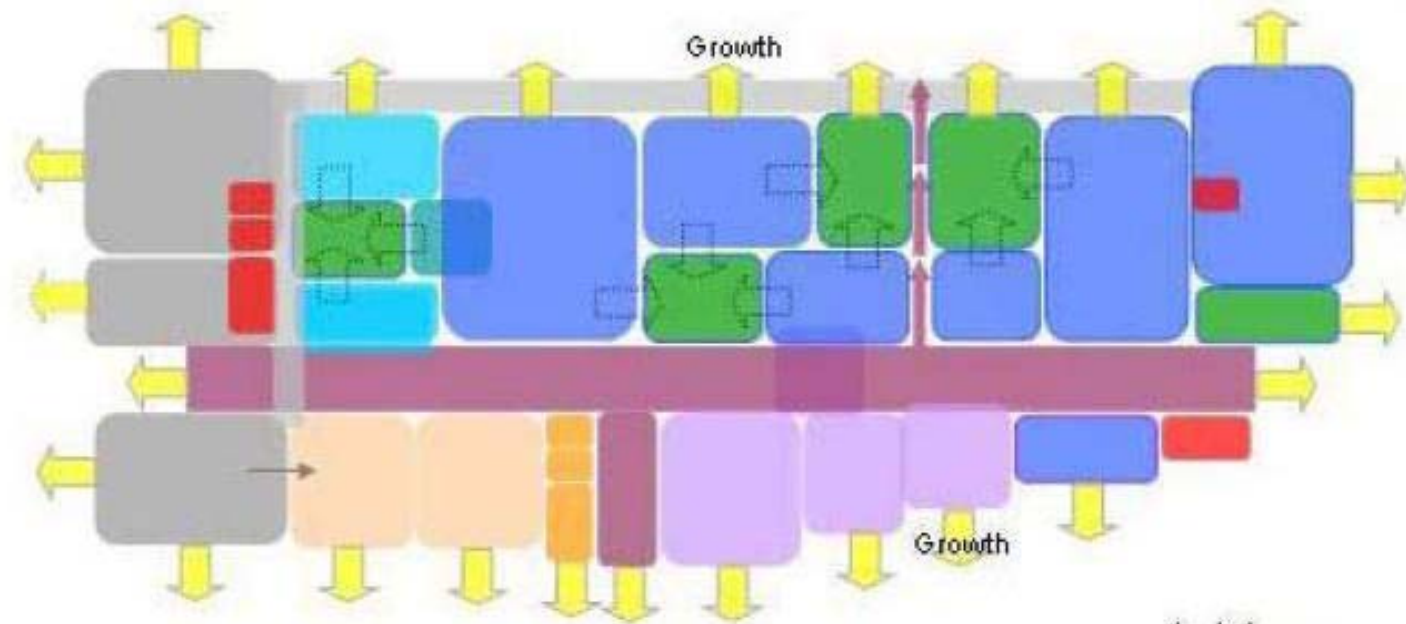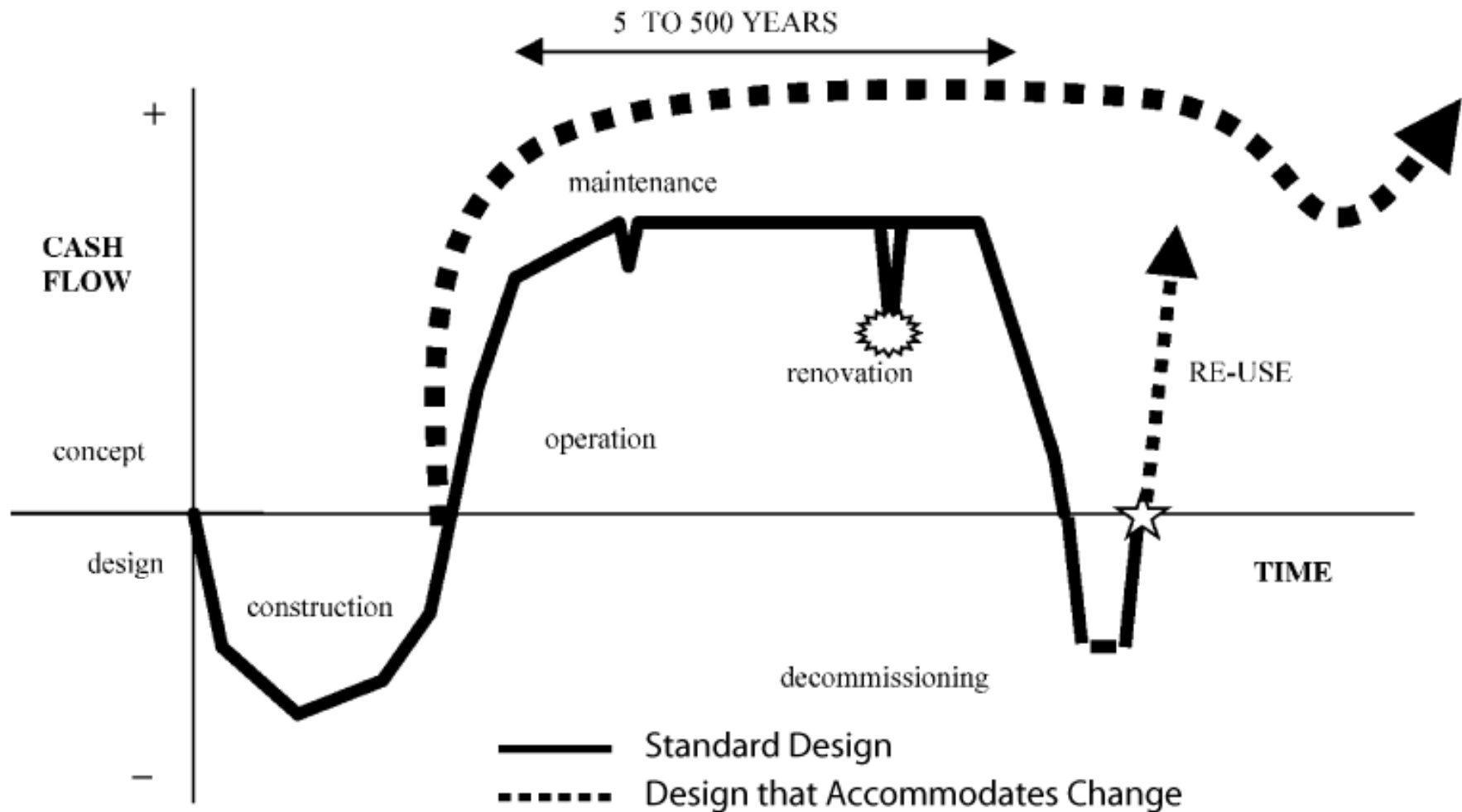
Design for Innovative Care Delivery Models in Safety-Net Clinics

Significance

- Safety-net clinics have consistently engaged with innovative care delivery models to better serve target populations and reduce health care costs.

- Safety-net clinic design has a substantial impact on the effectiveness of innovative care delivery models.

- However, guidelines and literature are limited.

Purpose of Paper

- To identify key features of the physical environment design for new care delivery models
- To provide preliminary design recommendations

Key Design Features
Innovative Care Models in Safety-Net Clinics

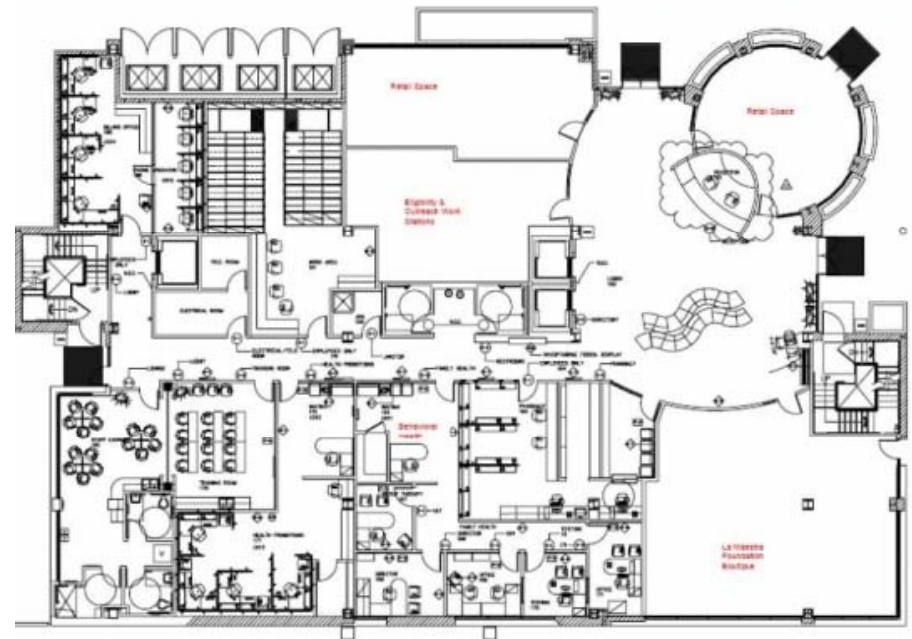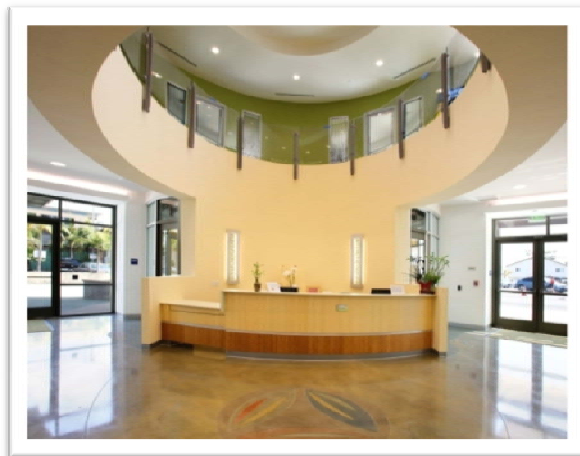|	CO-LOCATION OF SERVICES	OUTREACH OF SERVICES – MOBILE CLINICS	PATIENT-CENTERED CARE	SPACE FOR TEAM COLLABORATION	USE OF NEW TECHNOLOGY – TELEMEDICINE
11th Street Family Health Services[6]	✔		✔	✔	✔
Chronic care coordination[6]	✔		✔	✔	✔
Clinica Sierra Vista*	✔	✔	✔	✔	
Health commons[14,15]	✔		✔	✔	
Heart failure resource center[6]			✔	✔	✔
Home health care/ telemedicine[6]		✔	✔		✔
Hospital at home[6]		✔	✔	✔	
Hill Country*	✔		✔	✔	✔
La Maestra* (one-stop shop and circle of care)	✔		✔	✔	
The Little Clinics[6]	✔		✔		✔
Native American Health Center*	✔		✔	✔	
Nursing model for anticoagulation management service[6]		✔	✔		✔
Open Door* (population-based medicine, medical home)	✔	✔	✔	✔	✔
Patient-centered medical home[7]	✔	✔	✔	✔	✔
Salud in Colorado*	✔	✔	✔	✔	✔
Shasta*	✔	✔	✔	✔	✔
Transitional care model[6]		✔	✔	✔	✔

*Safety-net clinics interviewed.

Co-Location of Services

- Consolidation of various health care services (primary care, dental care, behavioral health, social work) and other community services (school, community center, and retail markets) in one building/site
  - One-stop shop
  - Holistic approach
  - Examples
    - La Maestra Community Health Centers at City Heights
    - Native American Health Center's Seven Directions
    - Open Door Community Health Centers

La Maestra

- Services Offered: Dental, Behavioral, Medical, Pediatrics, Family Medicine
- Additional Services: Nutrition and obesity, Prenatal and Ultrasound, Pharmacy, Optometry, Human Trafficking, Domestic Violence, Vision, Housing assistance, Literacy training, Laboratory, Substance Abuse, Food pantry, Economic development

Design recommendations
Co-Location of Services

- Determination of services provided based on community's needs
  - collecting anecdotal information
  - documenting existing services in the area, analyzing the special needs of targeted populations, and formally soliciting inputs
    - Focus groups, community meetings, interviews, and questionnaire
  - Facilitating patient flow and way-finding
    - a cognitively comprehensible layout design
    - high visibility of major destinations
    - perpendicular intersections
    - location of key facilities near the main hallway
    - signs

Outreach of Services – Mobile Clinics

- An innovative way to reduce health care disparity by moving care settings closer to the homeless and underserved populations
- Examples:
  - Clinica Sierra Vista
  - Project HOPE (Health Outreach for People Everywhere) of Shasta Community Health Center in Redding, CA
 - Salud Family Health Centers in Colorado

Design recommendations
Outreach of Services – Mobile Clinics

- Size and interior layout should be determined by the services to be provided
- Large operable windows should be installed to reduce claustrophobia and provide natural ventilation
- Proper insulation and air-conditioning for energy conservation, thermal comfort, medical equipment maintenance
- Finish materials - ease of maintenance and disinfection
- Barrier-free environment for disabilities

Patient-Centered Care

- Patient-centered care is a key component of many innovative care delivery models for the uninsured and underserved

- A healing, empowering, and supportive physical environment is an essential part of patient-centered care models.
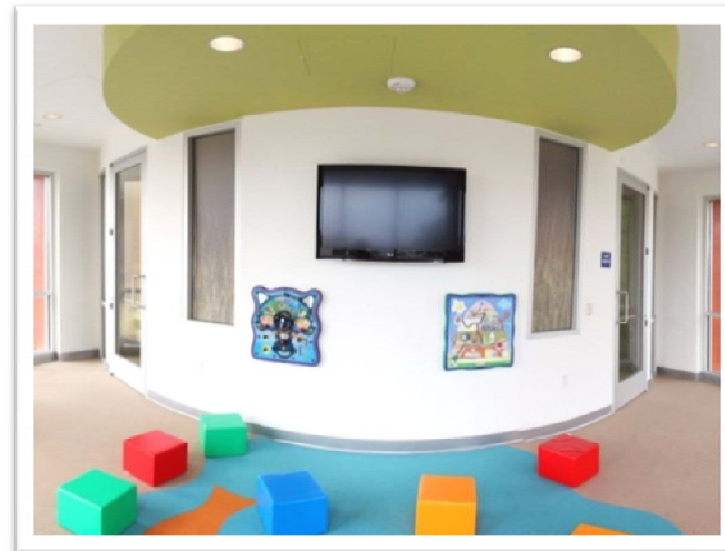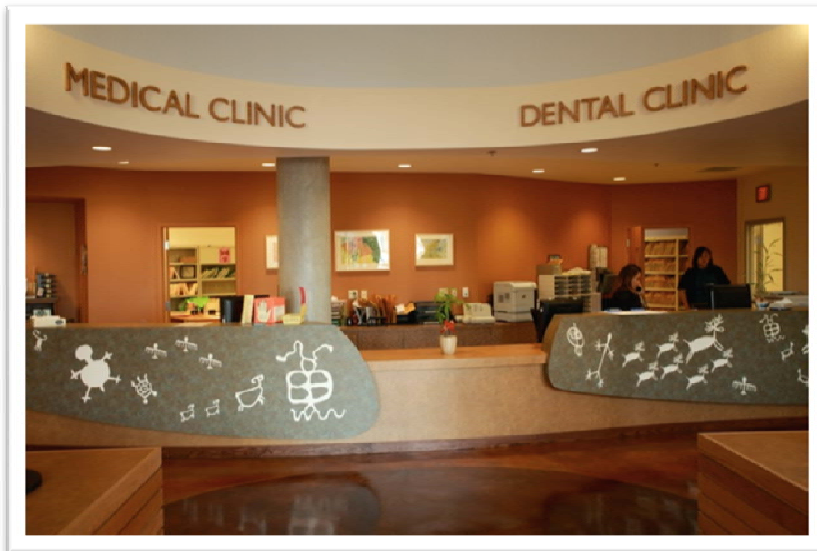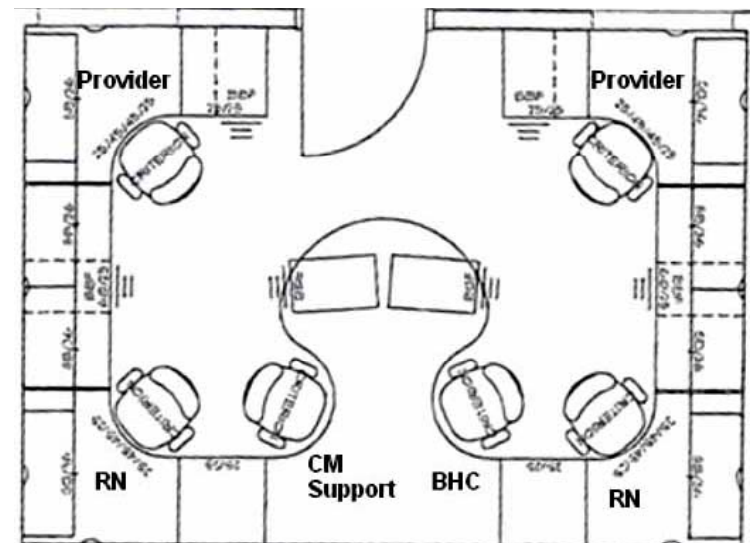
Design recommendations
Patient-Centered Care

- A welcoming environment (aesthetics)
  - Architectural motifs, signs, colors, and materials that are familiar to the local community
  - Reduce environmental stressors that are known to cause psychological and emotional discomfort
- Extra spaces and amenities support patients' families to meet patients' need for social support
- Improve patients' physical comfort
  - Comfortable and adjustable furniture
  - Efficient ventilation and air conditioning
  - Glare reduction
  - Partition design ensures visual and audio privacy

Space for Team Collaboration

- Effective collaboration between health care professionals is very important in innovative care delivery models that emphasize a holistic approach and deploy interdisciplinary teams for care delivery.
  - Improves understanding of team members' knowledge and skills,
  - Enhances decision-making,
  - Raises job satisfaction
  - Boosts efficiency
- Failures of team collaboration are not uncommon

Design recommendations
Space for Team Collaboration

- Visual connection between spaces and visual display of work information
- Proximity of team members, central location of circulating corridors, visually open workstations, and open stairways
- Informal meeting spaces along hallways with flexibly arranged furniture a
- Team collaboration spaces located close to individual spaces
- comfortable and adjustable furniture
- Display walls and electronic displays
- Visual and acoustic design enhances information security and minimizes distractions

Use of New Technology – Telemedicine

- Telemedicine, a fast-growing means of health care delivery to patients in remote, rural, and underserved areas
- Depending on the needs at specific facilities, telemedicine can encompass a variety of technologies and applications
  - Telephones, robotic instruments, interactive videoconferencing, biosensors, artificial intelligence, patient information storage and transmission

Design recommendations
Use of New Technology – Telemedicine

- A component–based framework including a set of functionality components provides a cost-effective way to construct a telemedicine system
- Accommodate probable future changes because of rapid technological progress
- Video-conferencing
    - Suitable lighting design and interior finish materials are essential to enhance the quality of video images
    - Locate the telemedicine room away from noise sources and use high-quality acoustic ceiling tiles
    - Convenient location of electric and Internet outlets
    - Careful selection of telemedicine apparatus

In Summary…Patient Experience

- Welcoming, familiar, unintimidating
- Patient-centered care: developing personal relationships
- One-stop care
- Family member presence & participation

In Summary…Provider Experience

- Interdisciplinary teams
- Collaboration & group interactions
- Technological advances

In Summary…Community Experience

- Location, location, location
- Way-finding
- Outreach programs

Questions?