The Landscape of Texting4Health
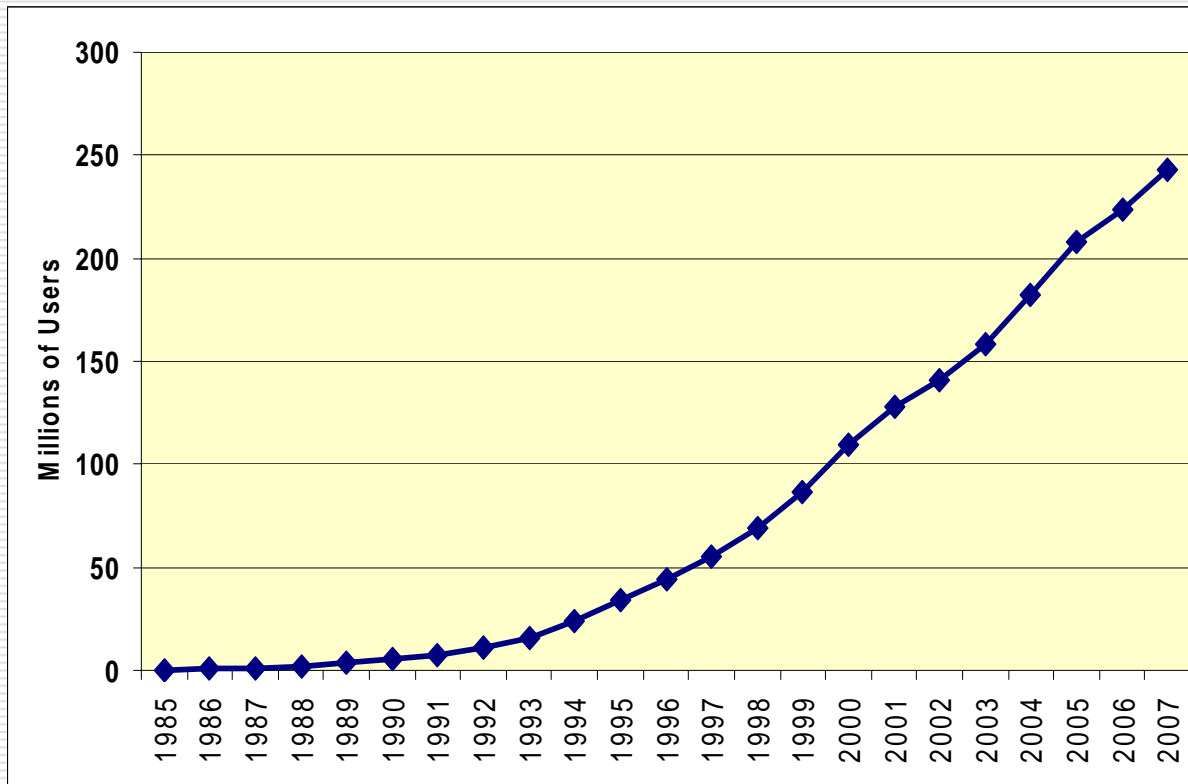
Stanford University
February 29, 2008

Richard Adler
Institute for the Future/People & Technology

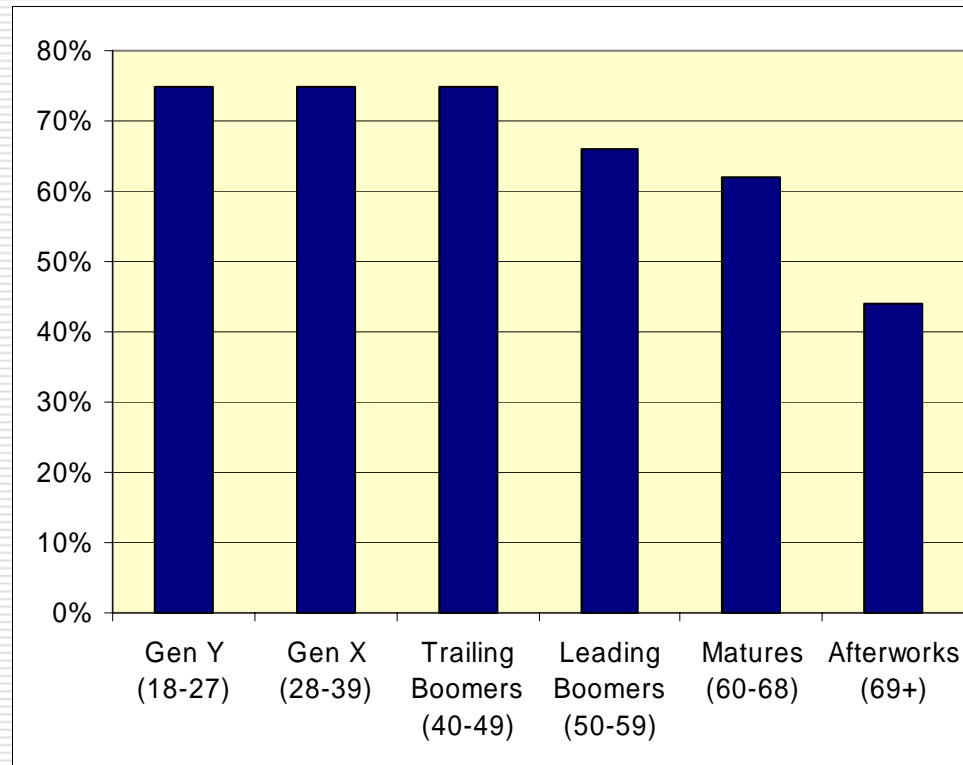# Growth of U.S. Mobile Users

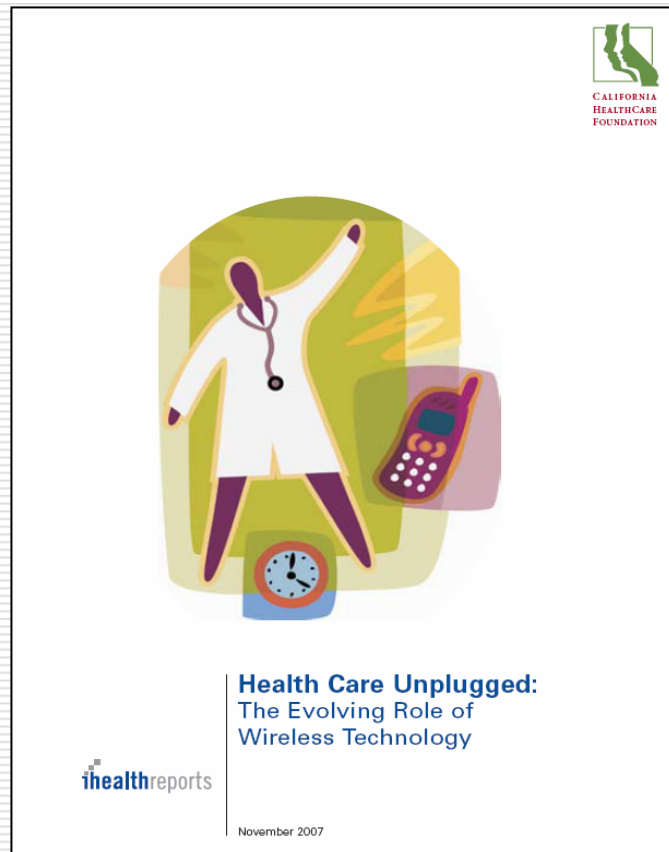Source: CTIA

Mobile Phone Use by Age

Emergence of Mobile Healthcare

Health Care Unplugged:
The Evolving Role of
Wireless Technology

ihealthreports

November 2007

Available at: www.chcf.org

Mobile Health Applications

	SENSOR PLACEMENT			INFORMATION FLOW			COMMUNICATIONS TYPE			
	Portable	Wearable	Implantable	Upstream	Downstream	2-Way	Data	Text	Multimedia	2-Way Video
Physiological Monitoring										
Cardiac	C	C	C	C			C			
Glucose	C		F	C			C			
Vital signs	C	C	F	C			C			
Patient Communication and Support										
Appointment reminders					C			C		
Health education and promotion					C	F		C	F	F
Patient compliance					C			C		
Patient engagement						C	C	C	F	F
Remote consultations						C				F

*C = current use, F = future use.

Limitations of Mobile Phones for Health Applications

- Multiple standards (GSM, CDMA)

- Multiple handset OS's (Symbian, Windows, RIM, Mac, Android, etc.)

- Each network is a "walled garden"

- Technology evolving rapidly

- Privacy/security concerns (HIPAA)

Mobile Health Applications: Focus on Texting

	SENSOR PLACEMENT			INFORMATION FLOW			COMMUNICATIONS TYPE			
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Physiological Monitoring										
Cardiac	C	C	C	C			C			
Glucose	C		F	C			C			
Vital signs	C	C	F	C			C			
Patient Communication and Support										
Appointment reminders						C		C		
Health education and promotion						C	F	C	F	F
Patient compliance						C		C		
Patient engagement						C	C	C	F	F
Remote consultations						C				F

*C = current use, F = future use.

Source: Healthcare Unplugged, CHCF, 2007

SMS Usage

- 95% of mobile phones are text-capable

- 100 million+ of 254 million U.S. mobile subscribers (~43%) use SMS

- 41 million Americans send text messages "almost every day"

- 28.8 billion text messages sent in June 2007

Source: CTIA, M:Metrics

SMS Use by Age

Ability to Send a Simple Text Message

Source: On the Move, University of Michigan, May 2006
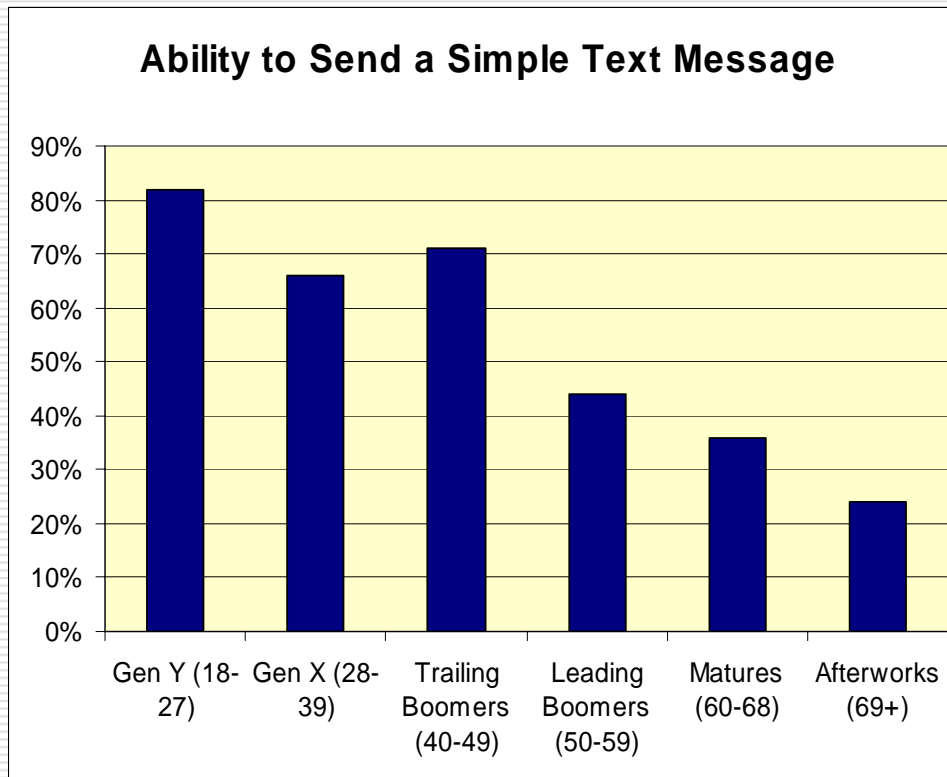
Typical SMS Costs (Verizon and AT&T)

- Pay-per-text = $0.15/message
- Texting plans
  - Unlimited messaging = $20.00/mo
  - 250 msgs/mo (Verizon) = $5.00/mo

Common Short Codes (CSCs)

- **Short code** is a 5- or 6-digit number to which an SMS can be sent (i.e., an abbreviated phone number)

- **CSC** is a short code that is common across all U.S. wireless service providers

- 5-digit CSCs introduced in 2003

- 6-digit CSCs introduced in 2006

- CSCs are administered by the CSCA (part of CTIA)

- Leasing a CSC costs $500/mo for a random number or $1,000/mo for a specific number

SMS/CSC Applications

- Polls and Surveys
- Voting
- Contests
- Product Promotion
- Information

- Games
- Subscriptions
- Donation
- Commerce

SMS Campaign:
Staples Sweepstakes

Source: HipCricket

SMS Campaign:
Verizon Trivia Challenge

14

Source: Vibe Media

SMS Reminders and Clinical Trial Recruitment

Source: Exco InTouch
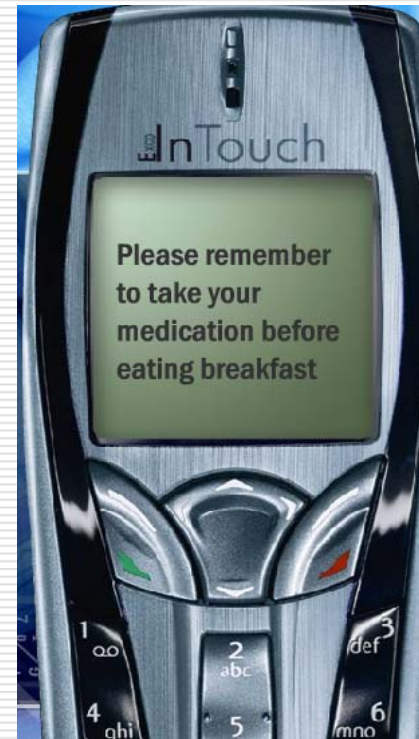
Elements of an SMS Campaign
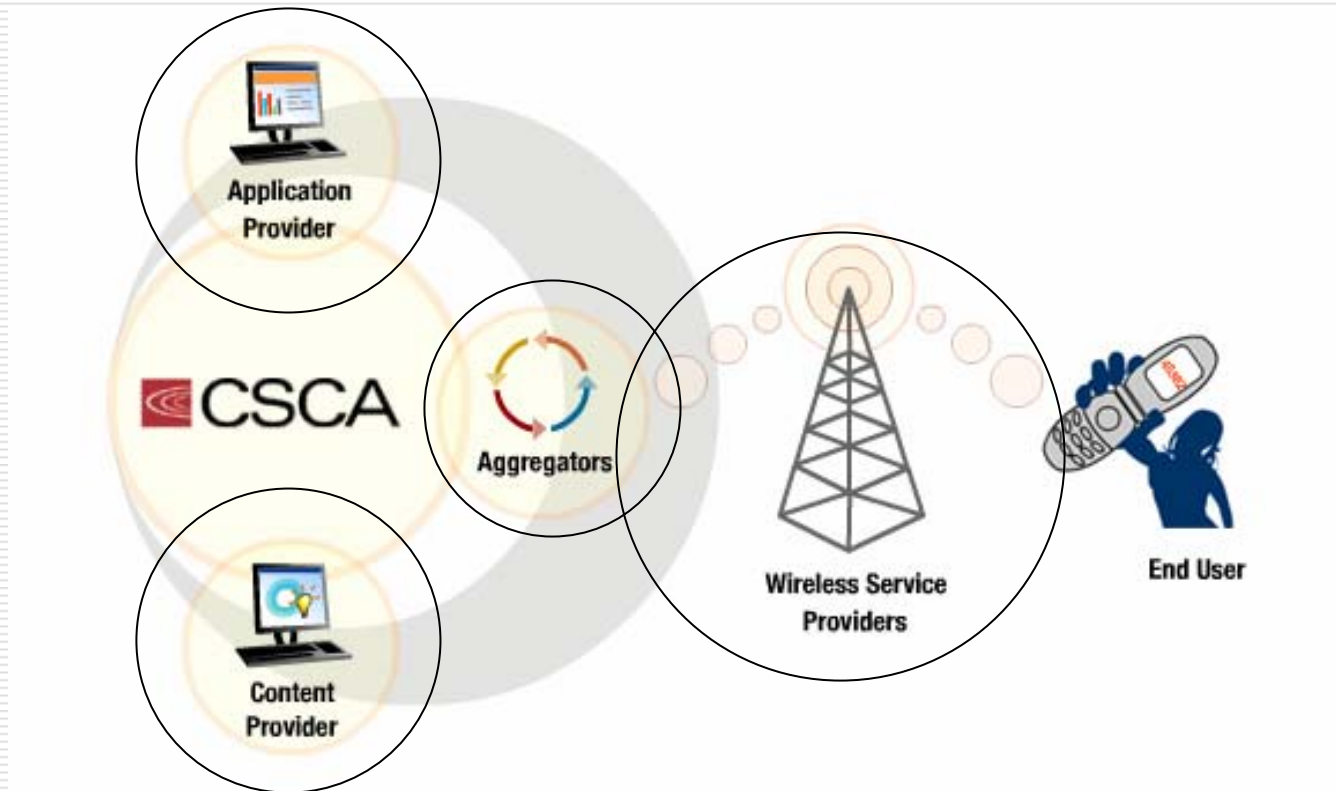
SMS Application Providers

ClairMail ClairMail Inc	Clickatell Clickatell	DISTRIBUTIVE NETWORKS Distributive Networks	enpocket Enpocket	FLYCELL Flycell Inc.
flyTXT Flytxt	g8wave g8wave	hipcricket HipCricket, Inc.	IMPACTMOBILE Impact Mobile	iLoop mobile iLoop Mobile, Inc.
ipsh! ipsh!	lsn inc. LSN, Inc. (Local Solutions Network)	mindmatics MindMatics	MLB.com/mobile MLB Advanced Media	Mobile Accord Mobile Accord
MOBILE MESSENGER Mobile Messenger	motricity Motricity	msnap mSnap Inc.	OpenMarket OpenMarket	SmartReply SmartReply

SMS Connection Aggregators

air2web Air2Web	mBlox mBlox	motricity Motricity	MXtelecom MX Telecom
OpenMarket. OpenMarket	SinglePoint SinglePoint	SYBASE 365 Sybase 365	upoc networks Upoc Networks
VeriSign VeriSign	Vibes Vibes Media		