Understanding and Managing Addiction as a Chronic Condition

Michael L. Dennis, Ph.D.
Chestnut Health Systems
Normal, IL

Presentation at the Congressional Addiction, Treatment, and Recovery Caucus Briefing, "Reducing Health Care Costs: Chronic Disease Management for Alcohol & Drug Problems," June 11, 2009 from 1:00-3:00 p.m., 122 Cannon House Office Building. This presentation was supported by funds from and data from NIDA grants no. R01 DA15523, R37-DA11323, CSAT contract no. 270-07-0191 and several other authors/studies. It is available electronically at www.chestnut.org/li/posters. The opinions are those of the author and do not reflect official positions of the government. I would like to thank Redonna Chandler, Wilson Compton, Mark Godley, Thomas Hilton, Randy Muck, Chris Scott, and Alan Sender, for their assistance in preparing this presentation. Please address comments or questions to the author at mdennis@chestnut.org or 309-451-7801.

.p

The Goals of this Presentation are to:

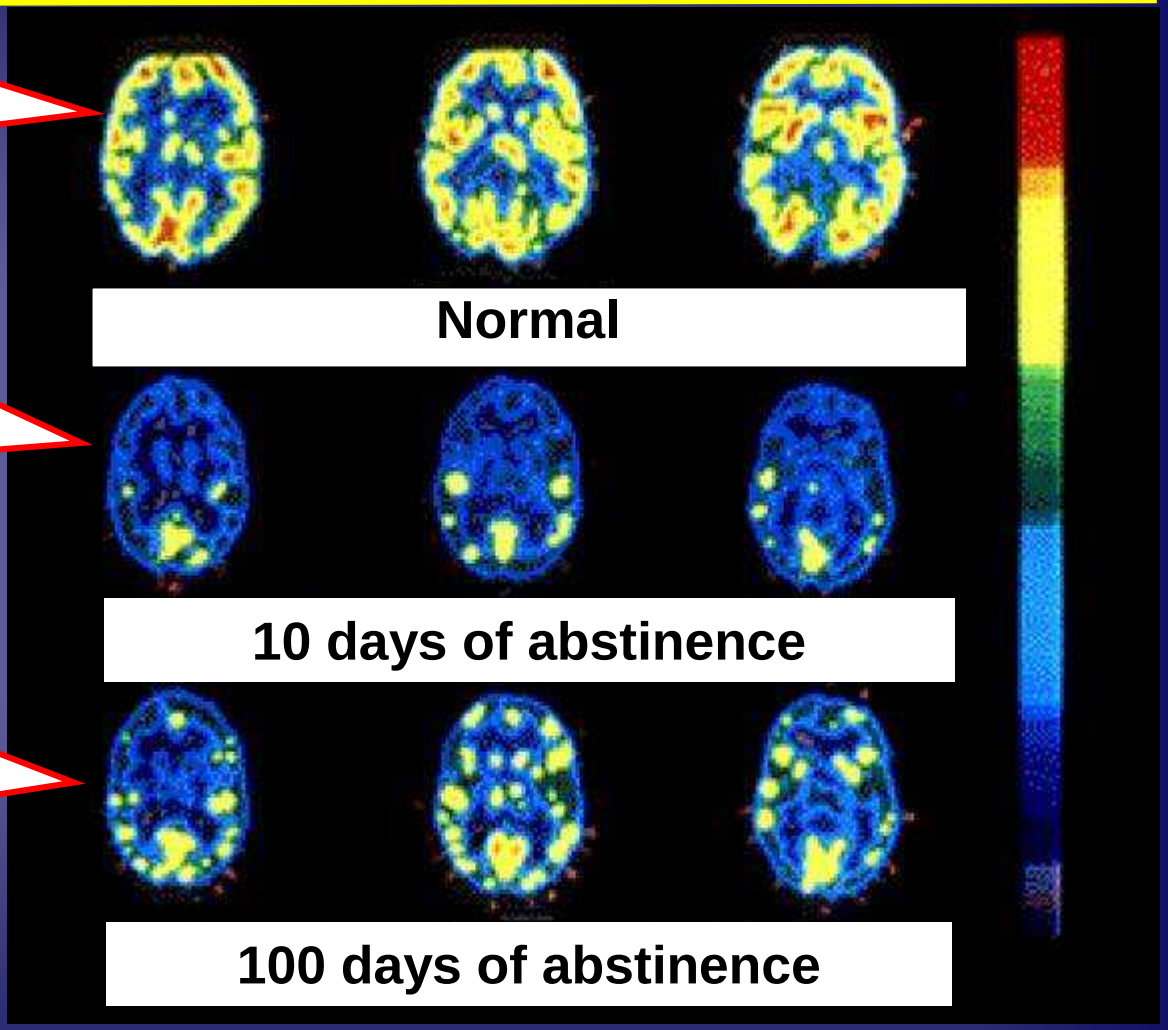
1. Illustrate the chronic nature of substance use disorders
2. Examine the likelihood and nature of sustained recovery
3. Demonstrate the feasibility of using simple protocols like recovery checkups to improve long-term outcomes

Prolonged Substance Use Injures The Brain: Healing Takes Time

Normal levels of brain activity in PET scans show up in yellow to red

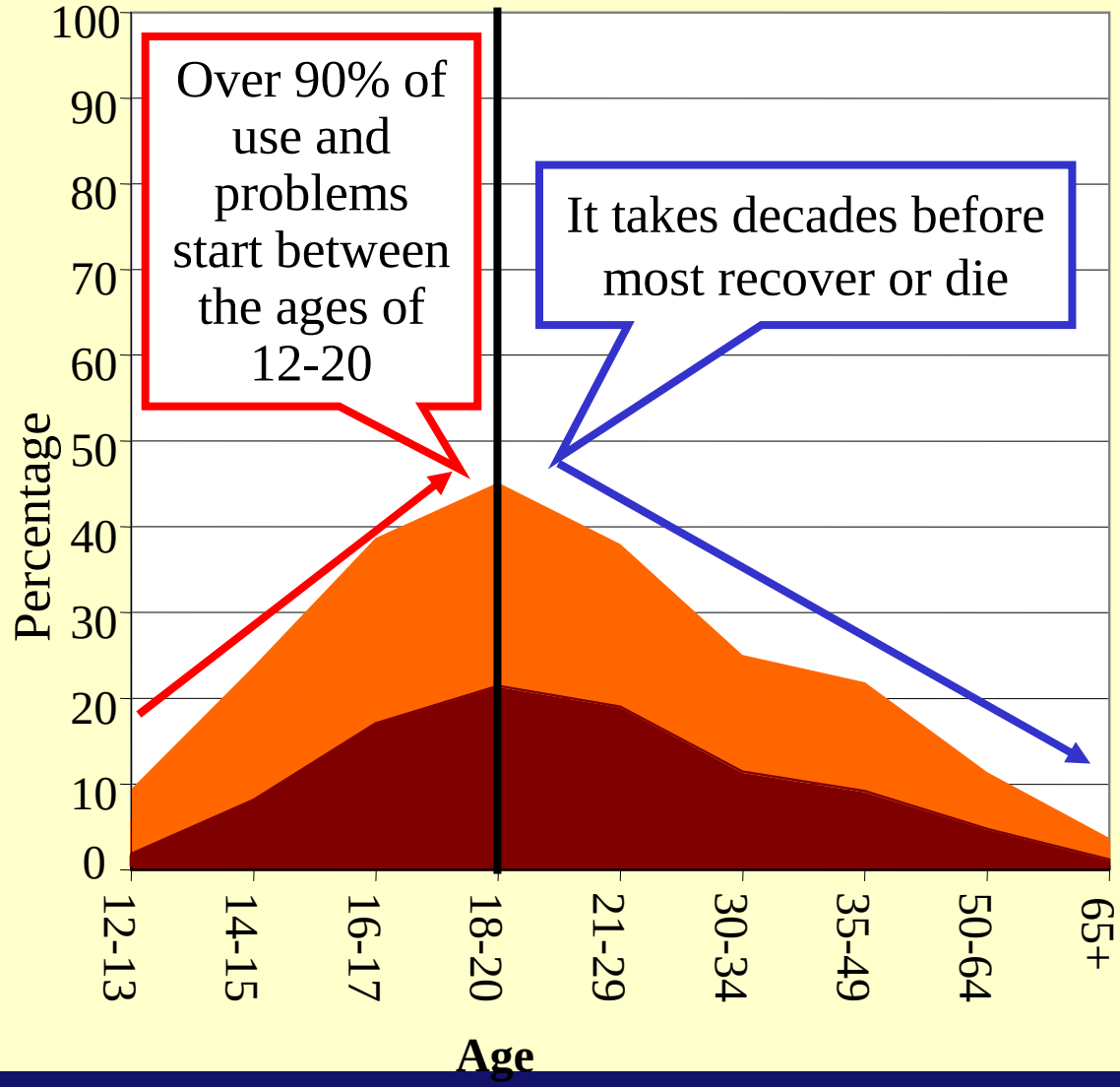
Reduced brain activity after regular use can be seen even after 10 days of abstinence

After 100 days of abstinence, we can see brain activity "starting" to recover



Source: Volkow ND, Hitzemann R, Wang C-I, Fowler IS, Wolf AP, Dewey SL. Long-term frontal brain metabolic changes in cocaine abusers. *Synapse* 11:184-190, 1992; Volkow ND, Fowler JS, Wang G-J, Hitzemann R, Logan J, Schlyer D, Dewey 5, Wolf AP. Decreased dopamine D2 receptor availability is associated with reduced frontal metabolism in cocaine abusers. *Synapse* 14:169-177, 1993.

Alcohol and Other Drug Abuse, Dependence and Problem Use Peaks at Age 20



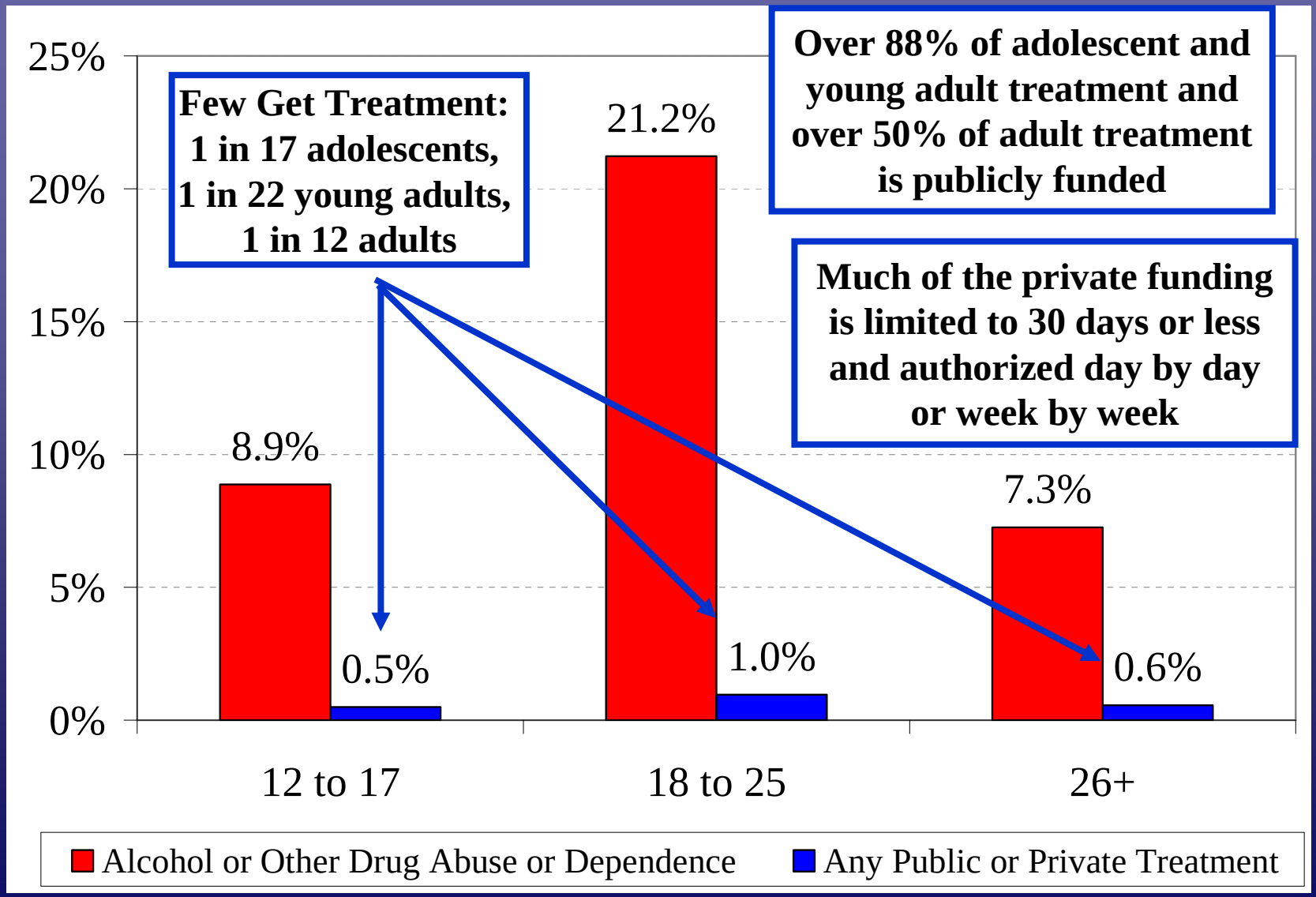
People with drug dependence die an average of 22.5 years sooner than those without a diagnosis

Severity Category

- Other drug or heavy alcohol use in the past year
- Alcohol or Drug Use (AOD) Abuse or Dependence in the past year

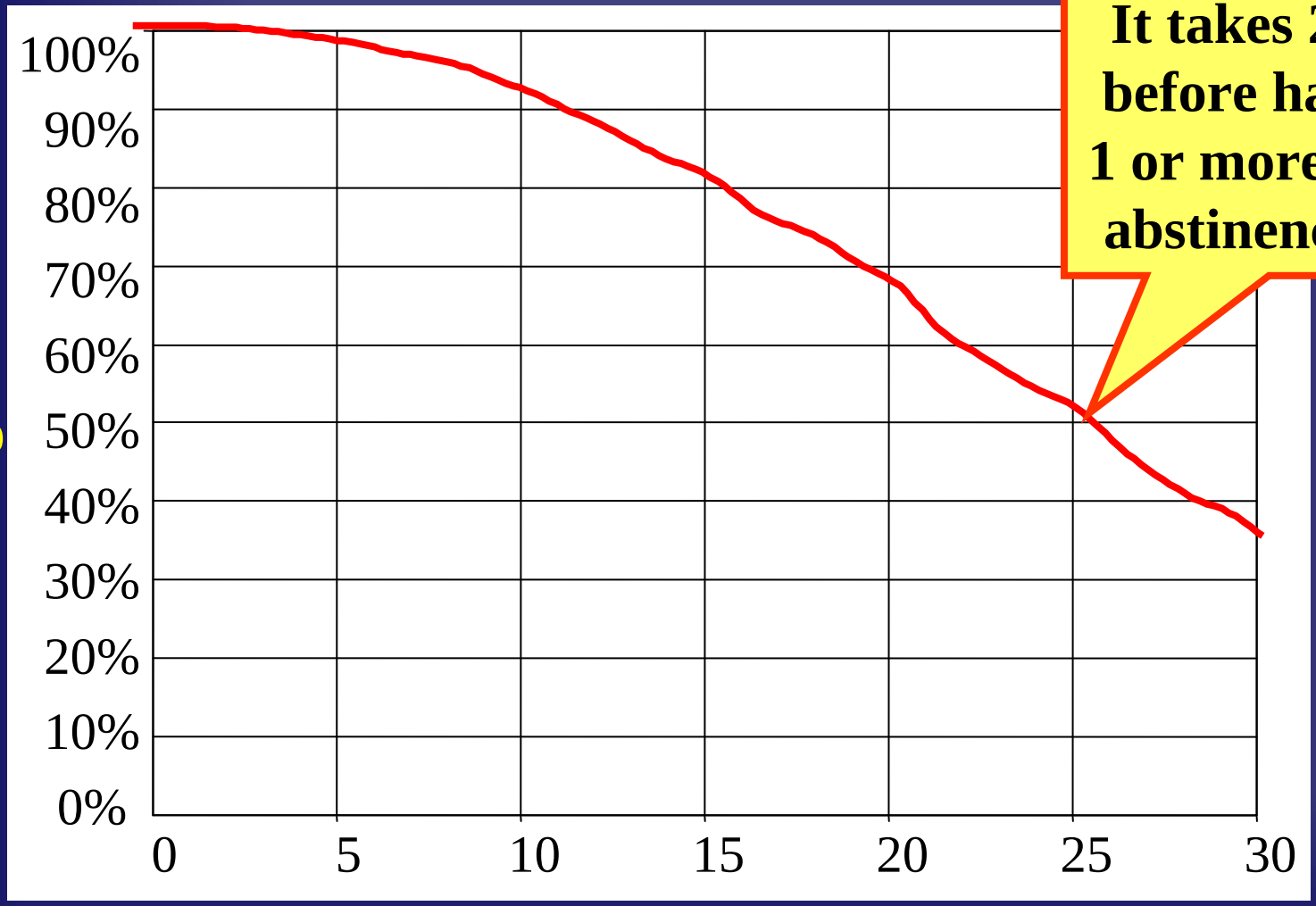
Source: 2002 NSDUH and Dennis & Scott, 2007, Neumark et al., 2000

Substance Use Disorders are Common, But Treatment Participation Rates Are Low



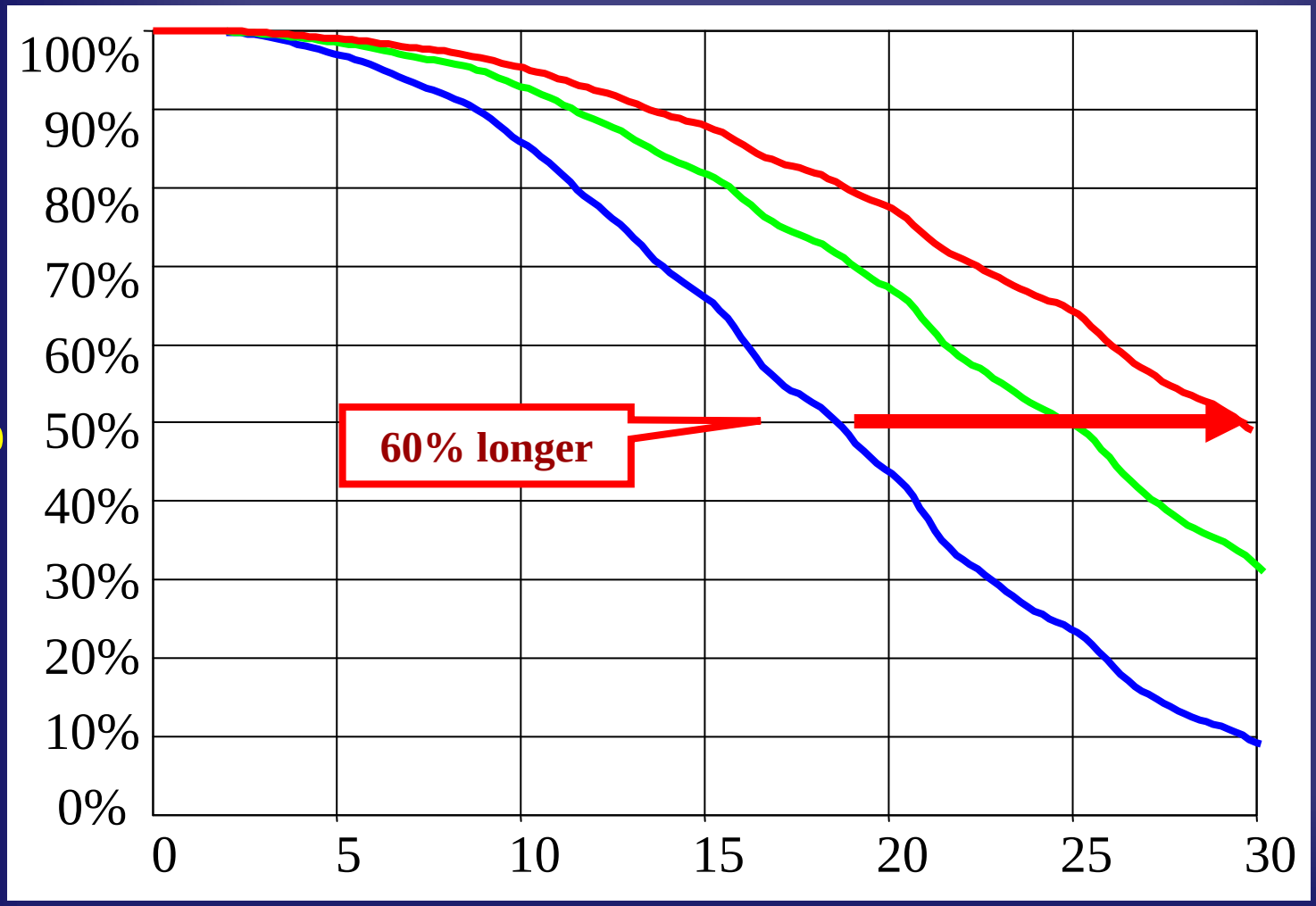
Source: OAS, 2006 – 2003, 2004, and 2005 NSDUH

People Entering Publicly Funded Treatment Generally Use For Decades



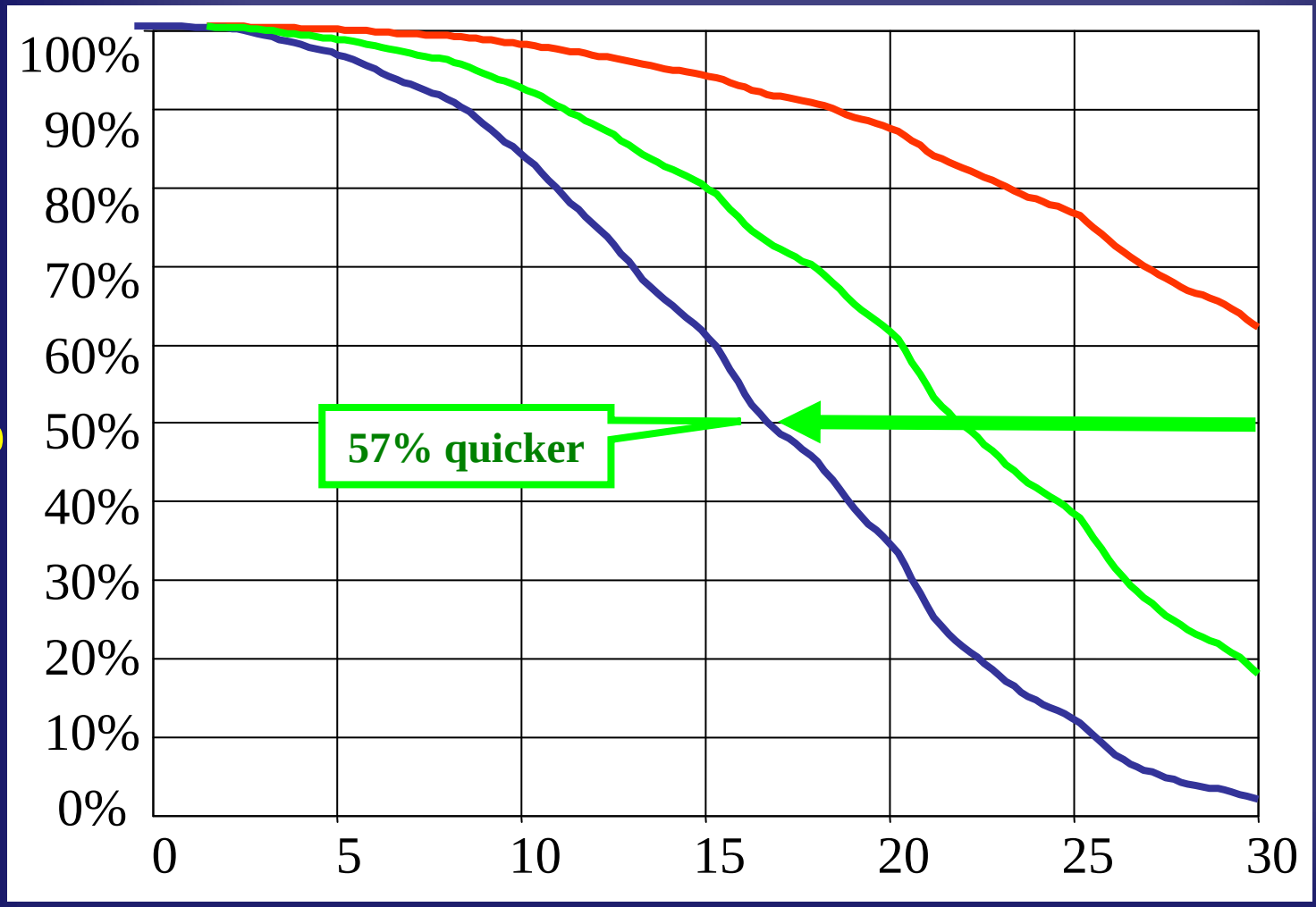
Source: Dennis et al., 2005

The Younger They Start, The Longer They Use



Source: Dennis et al., 2005

The Sooner They Get The Treatment, The Quicker They Get To Abstinence



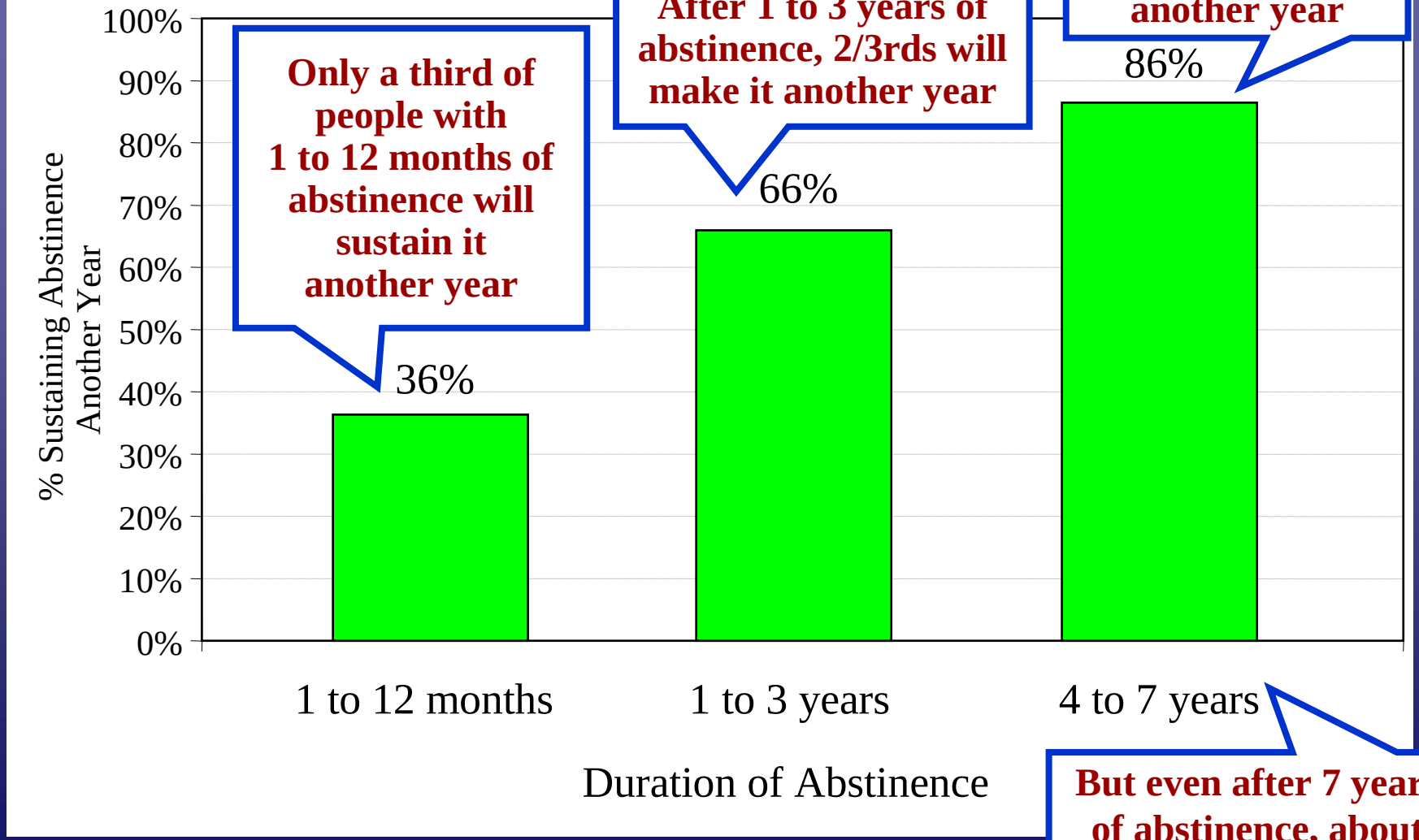
Source: Dennis et al., 2005

After Initial Treatment…

- Relapse is common, particularly for those who:
  - Are Younger
  - Have already been to treatment multiple times
  - Have more mental health issues or pain
- It takes an average of 3 to 4 treatment admissions over 9 years before half reach a year of abstinence
- Yet over 2/3rds do eventually abstain
- Treatment predicts who starts abstinence
- Self help engagement predicts who stays abstinent

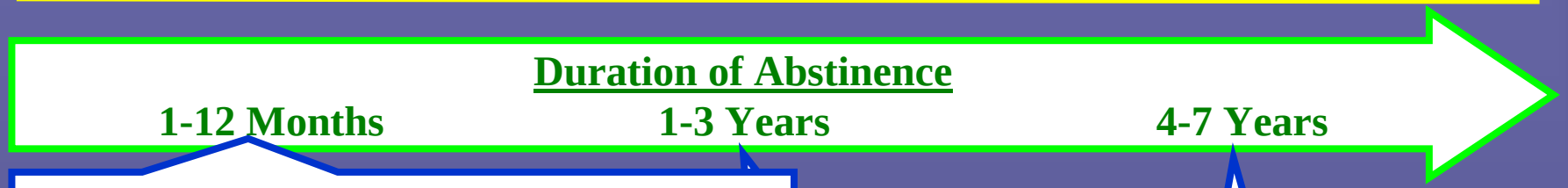
Source: Dennis et al., 2005, Scott et al 2005

The Likelihood of Sustaining Abstinence Another Year Grows Over Time



Source: Dennis, Foss & Scott (2007)

What does recovery look like on average?



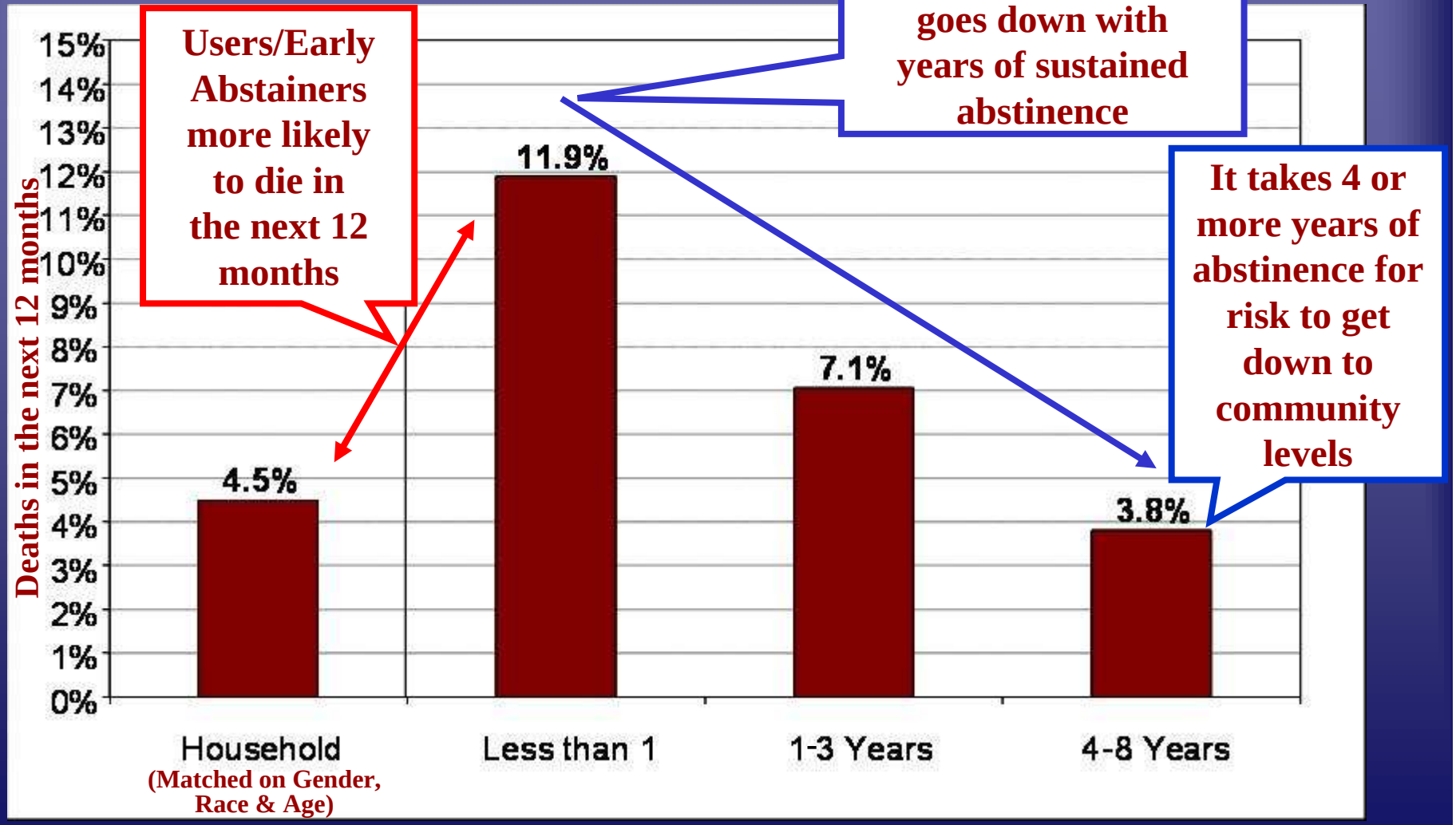
- More clean and sober friends
- Less illegal activity and incarceration
- Less homelessness, violence and victimization
- Less use by others at home, work, and by social peers

- Virtual elimination of illegal activity and illegal income
- Better housing and living situations
- Increasing employment and income

- More social and spiritual support
- Better mental health
- Housing and living situations continue to improve
- Dramatic rise in employment and income
- Dramatic drop in people living below the poverty line

Source: Dennis, Foss & S

Sustained Abstinence Also Reduces The Risk of Death



Source: Scott, Dennis, Simeone & Funk (forthcoming)

Other factors related to death rates

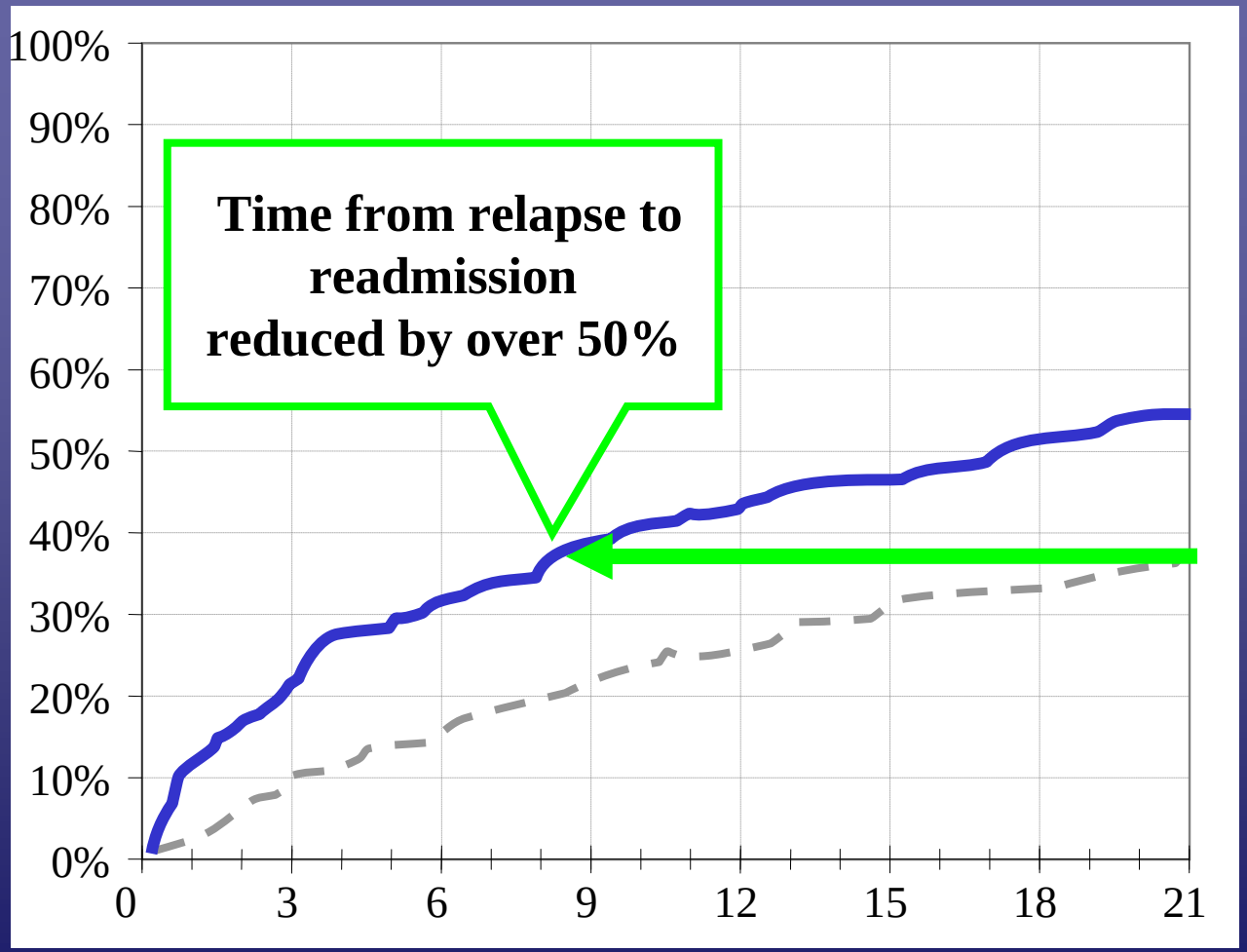
- Death is more likely for those who
  - Are older
  - Are engaged in illegal activity
  - Have chronic health conditions
  - Spend a lot of time in hospitals
  - Spend a lot of time in and out of substance abuse treatment

- Death is less common for those who
  - Have a greater percent of time abstinent
  - Have longer periods of continuous abstinence
  - Get back to treatment sooner after relapse

Recovery Management Checkups (RMC)

- Quarterly monitoring after treatment
- Linkage meeting/motivational interviewing to:
  - provide personalized feedback to participants about their substance use and related problems,
  - help the participant recognize the problem and consider returning to treatment,
  - address existing barriers to treatment, and
  - schedule an assessment.
- Linkage assistance
  - reminder calls and rescheduling
  - Transportation and being escorted as needed
- Treatment Engagement Specialist

Reducing Time from Relapse to Readmission



50% more got back to treatment

55% Checkups

37% Control

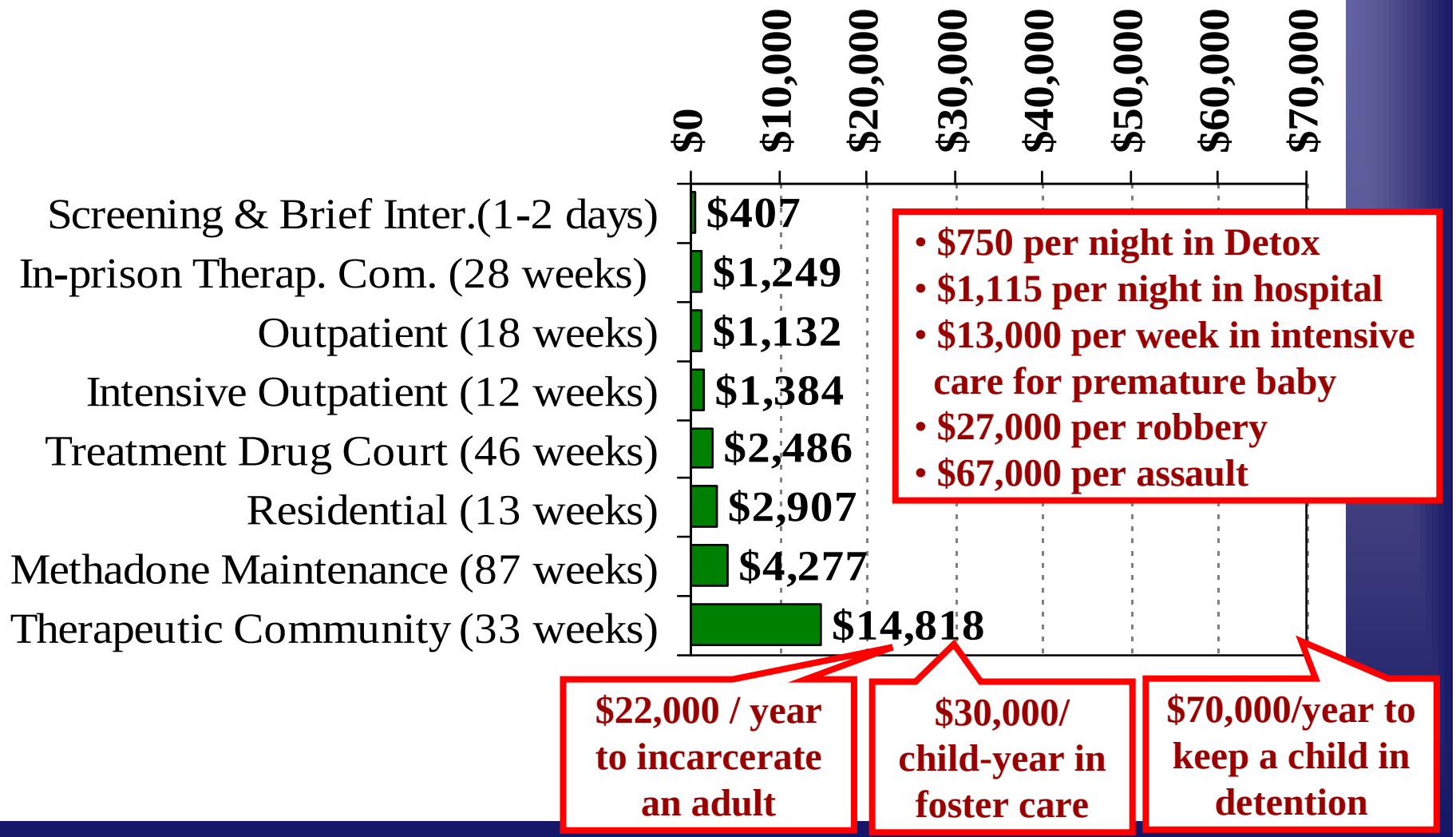
Source: Scott & Dennis (2009)

Positive Consequences of Early Readmission

- **Checkups and Early Readmission to Treatment were associated with:**
  - **Less substance use and problems**
  - **Longer periods of abstinence**
  - **More attendance and engagement in self help activities**
- **Above were associated with:**
  - **Fewer HIV risk behaviours**
  - **Less illegal activity, arrests, and time incarcerated**
  - **Fewer mental health problems**
  - **Less utilization and costs to society**

Source: Scott & Dennis (2009)

Cost of Substance Abuse Treatment Episode



Source: French et al., 2008; Chandler et al., 2009; Capriccioso, 2004

Investing in Treatment has a Positive Annual Return on Investment (ROI)

- Substance abuse treatment has been shown to have a ROI of between $1.28 to $7.26 per dollar invested
- Treatment drug courts have an average ROI of $2.14 to $2.71 per dollar invested

Source: Bhati et al., (2008); Ettner et al., (2006)

Summary Points

- Addiction can be a chronic condition with high costs to the individual and society
- Getting people to recovery earlier requires getting people to treatment sooner after initial use and after relapse
- Simple protocols like recovery checkups can help achieve abstinence sooner and improve a wide range of outcomes

Implications for Health Care Reform

- Finance addiction care similar to models for other chronic conditions
- Fund programs to get people into treatment early
- Expand capacity to reduce treatment gap
- Increase step down and continuing care
- Increase links to self help and recovery services
- Require several years of monitoring and early re-intervention when people relapse

References

- Bhati et al. (2008) To Treat or Not To Treat: Evidence on the Prospects of Expanding Treatment to Drug-Involved Offenders. Washington, DC: Urban Institute.
- Capriccioso, R. (2004). Foster care: No cure for mental illness. Connect for Kids. Accessed on 6/3/09 from http://www.connectforkids.org/node/571
- Chandler, R.K., Fletcher, B.W., Volkow, N.D. (2009). Treating drug abuse and addiction in the criminal justice system: Improving public health and safety. Journal American Medical Association, 301(2), 183-190
- Dennis, M.L., Foss, M.A., & Scott, C.K (2007). An eight-year perspective on the relationship between the duration of abstinence and other aspects of recovery. Evaluation Review, 31(6), 585-612
- Dennis, M. L., Scott, C. K. (2007). Managing Addiction as a Chronic Condition. Addiction Science & Clinical Practice , 4(1), 45-55.
- Dennis, M. L., Scott, C. K., Funk, R., & Foss, M. A. (2005). The duration and correlates of addiction and treatment careers. Journal of Substance Abuse Treatment, 28, S51-S62.
- Ettner, S.L., Huang, D., Evans, E., Ash, D.R., Hardy, M., Jourabchi, M., & Hser, Y.I. (2006). Benefit Cost in the California Treatment Outcome Project: Does Substance Abuse Treatment Pay for Itself?. Health Services Research, 41(1), 192-213.
- French, M.T., Popovici, I., & Tapsell, L. (2008). The economic costs of substance abuse treatment: Updated estimates of cost bands for program assessment and reimbursement. Journal of Substance Abuse Treatment, 35, 462-469
- Neumark, Y.D., Van Etten, M.L., & Anthony, J.C. (2000). Drug dependence and death: Survival analysis of the Baltimore ECA sample from 1981 to 1995. Substance Use and Misuse, 35, 313-327.
- Office of Applied Studies (2006). Results from the 2005 National Survey on Drug Use and Health: National Findings Rockville, MD: Substance Abuse and Mental Health Services Administration. http://www.oas.samhsa.gov/NSDUH/2k5NSDUH/2k5results.htm#7.3.1
- Riley, B.B.,, Scott, C.K, & Dennis, M.L. (2008). The effect of recovery management checkups on transitions from substance use to substance abuse treatment and from treatment to recovery. Poster presented at the UCLA Center for Advancing Longitudinal Drug Abuse Research Annual Conference, August 13-15, 2008, Los Angles, CA. www.caldar.org .
- Scott, C. K., & Dennis, M. L. (in press). Results from Two Randomized Clinical Trials evaluating the impact of Quarterly Recovery Management Checkups with Adult Chronic Substance Users. Addiction.
- Scott, C. K., Dennis, M. L., Simeone, R., & Funk R. (forthcoming). Predicting the likelihood of death of substance users over 9 years based on baseline risk, treatment and duration of abstinence. Chicago, IL: Chestnut Health Systems.
- Scott, C. K., Foss, M. A., & Dennis, M. L. (2005). Pathways in the relapse, treatment, and recovery cycle over three years. Journal of Substance Abuse Treatment, 28, S61-S70.
- Volkow N.D., Fowler J.S., Wang G-J., Hitzemann R., Logan J., Schlyer D., Dewey 5., Wolf A.P. (1993). Decreased dopamine D2 receptor availability is associated with reduced frontal metabolism in cocaine abusers. Synapse 14:169-177.
- Volkow, N.D., Hitzemann R., Wang C-I., Fowler I.S., Wolf A.P., Dewey S.L. (1992). Long-term frontal brain metabolic changes in cocaine abusers. Synapse 11:184-190.