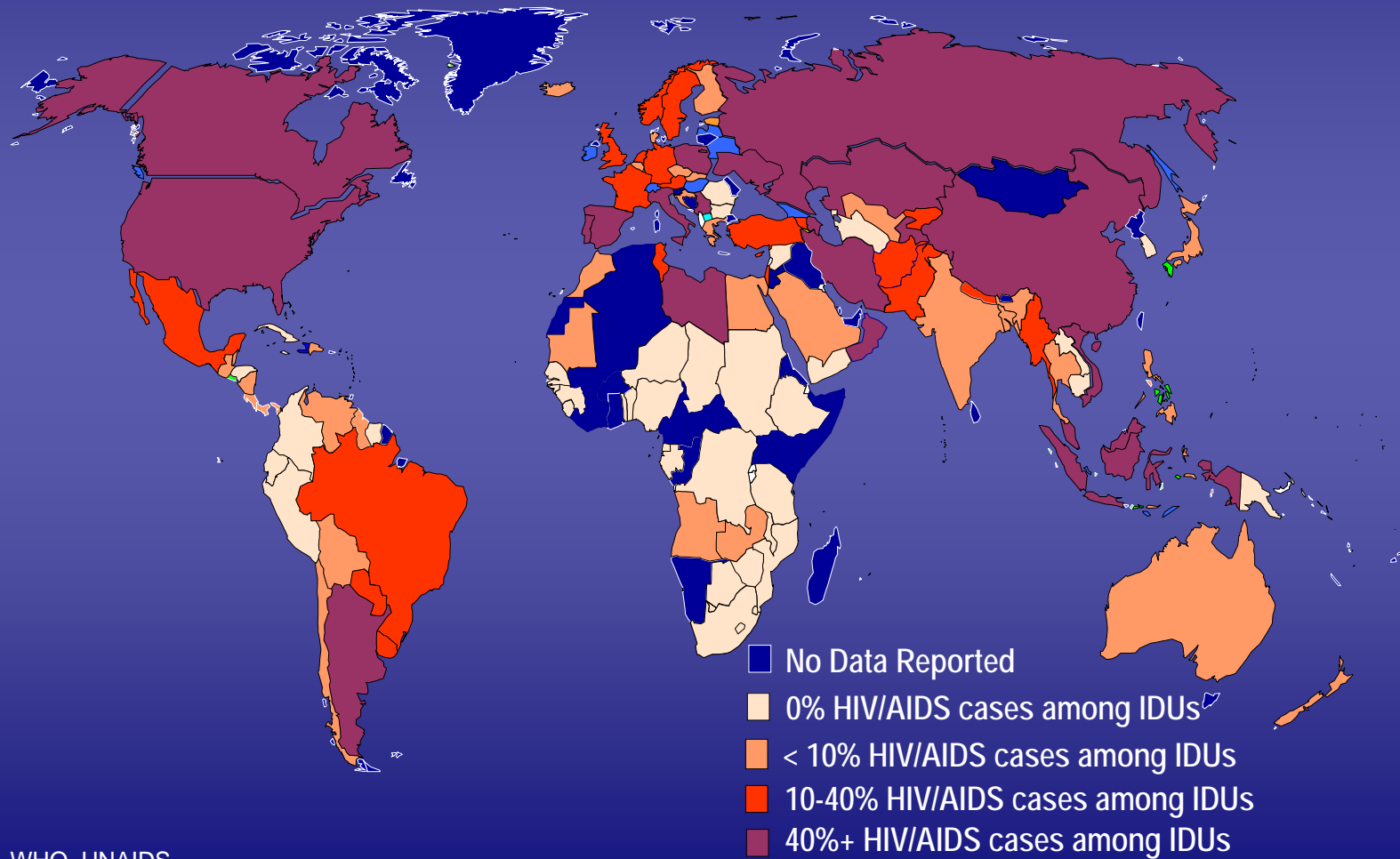


Behavioral Interventions for HIV Risk Reduction and HIV Prevention: An International Perspective

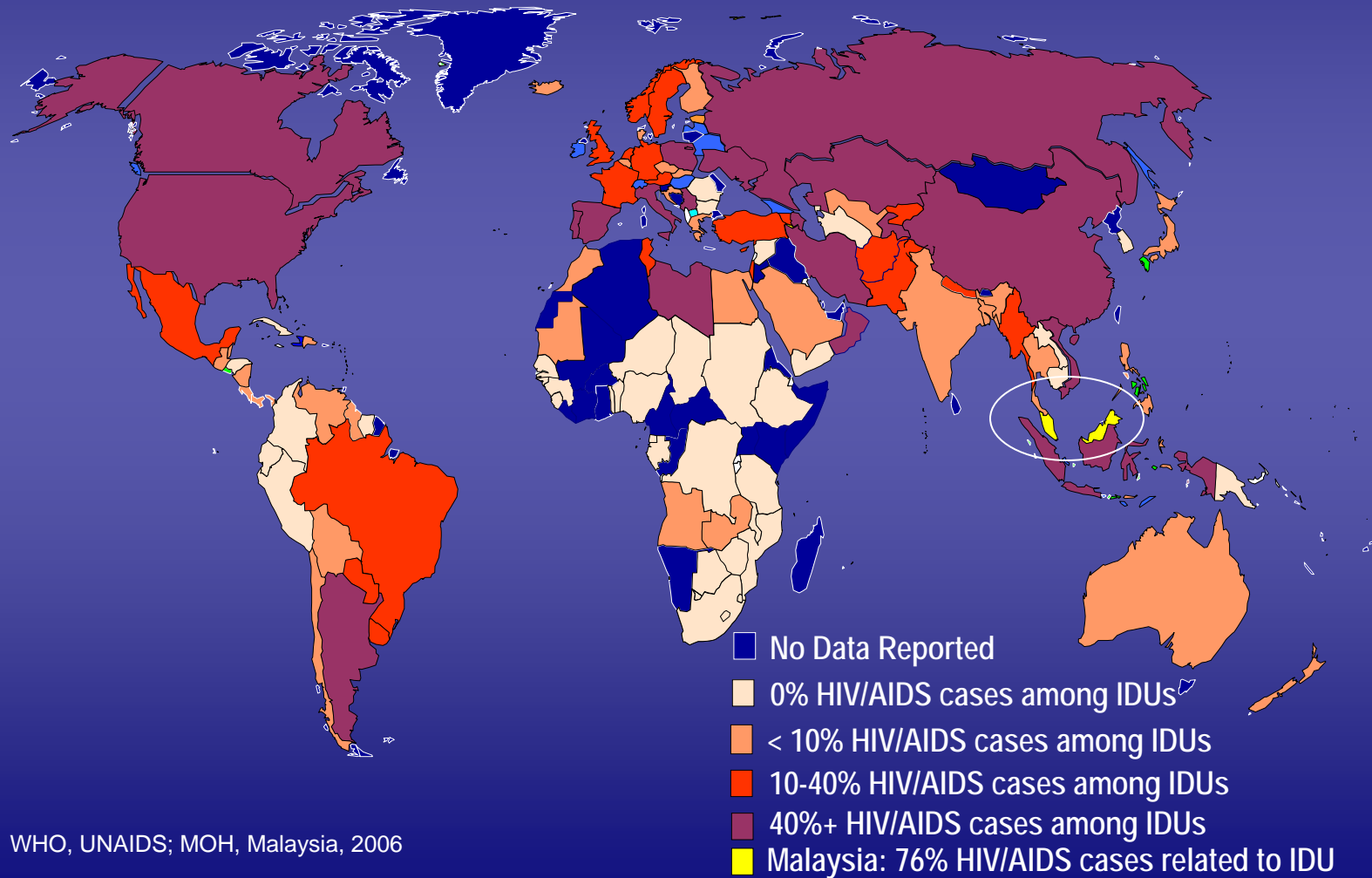
Marek C. Chawarski
Yale University School of Medicine

HIV/AIDS cases among IDUs



SOURCE: WHO, UNAIDS

HIV/AIDS cases among IDUs

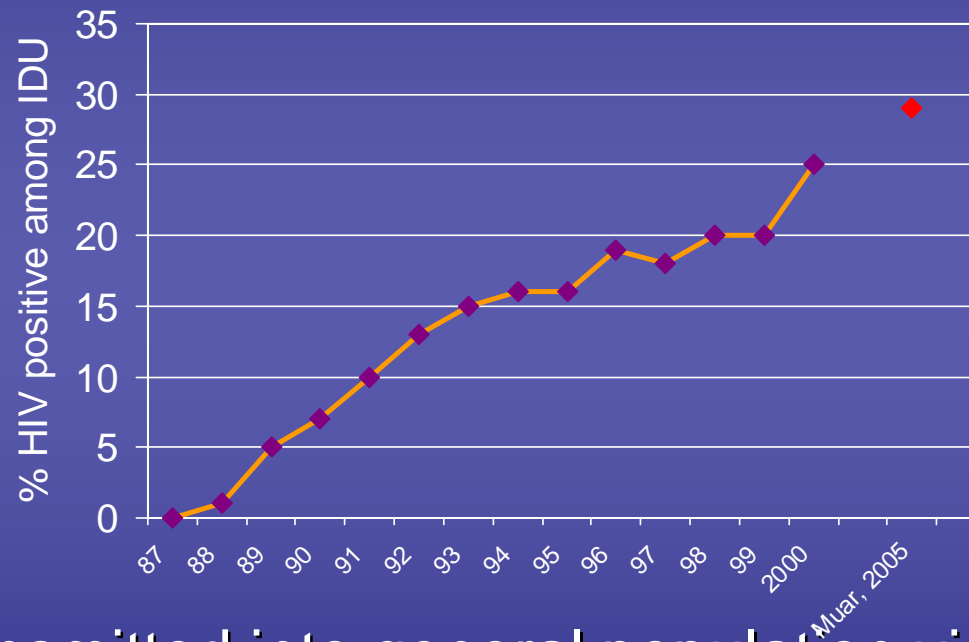


SOURCE: WHO, UNAIDS; MOH, Malaysia, 2006

Malaysia – a case study

■ HIV continues to spread among IDUs

- Steady increase in HIV prevalence among IDU in the past 20 years



■ HIV transmitted into general population via sexual behaviors of drug users

- 76% of 73,427 HIV-positive cases in Malaysia attributable to IDU (Ministry of Health, Malaysia, June 2006)

Opiate use in Malaysia

- Heroin and other opiates, (e.g., morphine, opium, buprenorphine) are the dominant drugs of abuse
- High proportion IDU
 - >70% report lifetime IDU
 - >40% report current IDU
- 275,499 registered heroin users in 2004
 - Heroin dependent individuals estimated to exceed 500,000
- Rapid increase in amphetamine-type stimulant (ATS) abuse in recent years

Drug treatment policy in Malaysia

- Until recently, the Malaysian Narcotic Agency, and not the Ministry of Health, was responsible for dealing with drug abuse and related problems
 - Establishing policies, training rehabilitation personnel, etc.
- Drug use, possession of drugs/drug paraphernalia, or testing positive for drugs typically led to enforced internment in residential drug rehabilitation centers
 - Several centers continue to operate
- The failure of criminal penalties to prevent drug use and increase in HIV rates resulted in a growing interest to explore medical treatment options, including agonist maintenance
 - Methadone opposed on cultural and religious grounds

Challenges in Malaysia - 2002

- In the context of primarily criminal treatment of drug abuse problems and a rising interest in medical treatments, important to
 - Provide “local evidence” of improved efficacy of medication maintenance over detoxification only
 - Train addiction specialists, drug counselors, and other medical personnel
 - Help expand access to treatment and improve treatment availability
- Challenges addressed by NIDA funded international collaborative grant (PI: R.S. Schottenfeld)
 - Established a community-based outpatient research clinic and physician office sites in Muar (~120,000 population)
- To date, Yale and Muar teams completed 1 RCT (N=126) and 2 pilot studies (N=10 and N=26)
- Presently conducting the pilot phase of a second RCT (N=240)

Research team in Muar, Malaysia

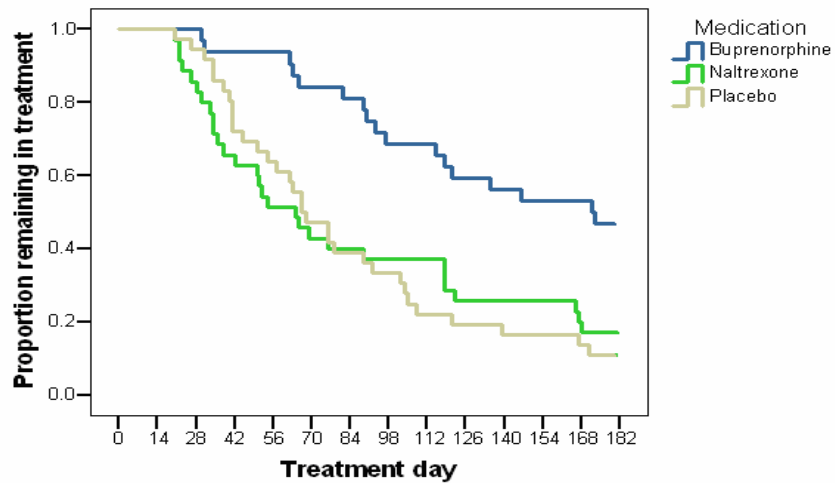


First RCT in Muar, Malaysia

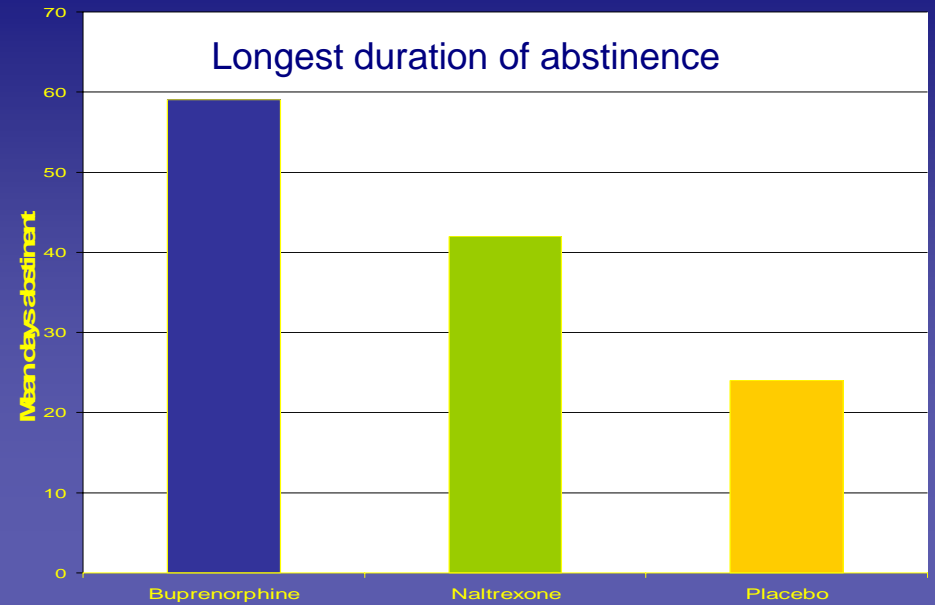
- Randomized, double-blind, double-dummy clinical trial comparing detoxification followed by drug counseling only, or drug counseling combined with buprenorphine or with naltrexone
- 24 week outpatient drug and HIV risk reduction counseling (all patients)
 - Counseling consisted of weekly individual sessions with a nurse counselor, monthly group sessions with a physician, and additional family sessions as needed
- Each patient (N=126) randomly assigned to
 - Thrice weekly buprenorphine maintenance, or
 - Thrice weekly naltrexone maintenance, or
 - Thrice weekly placebo medication

Main study outcomes

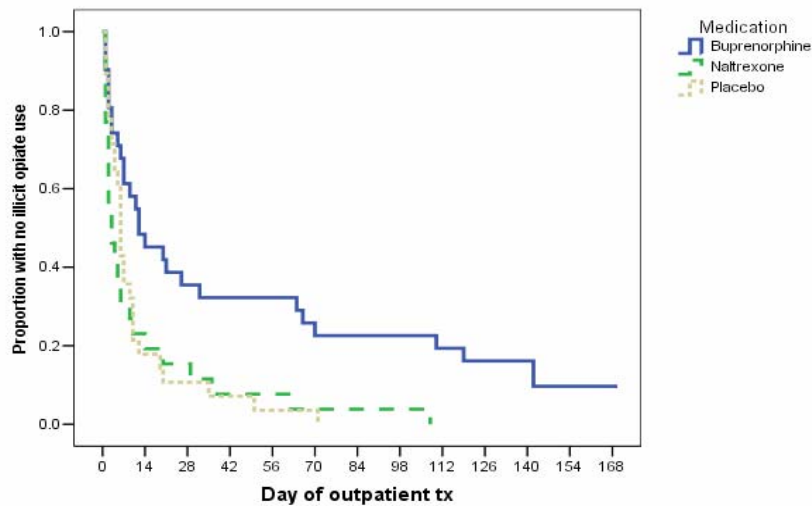
Treatment retention



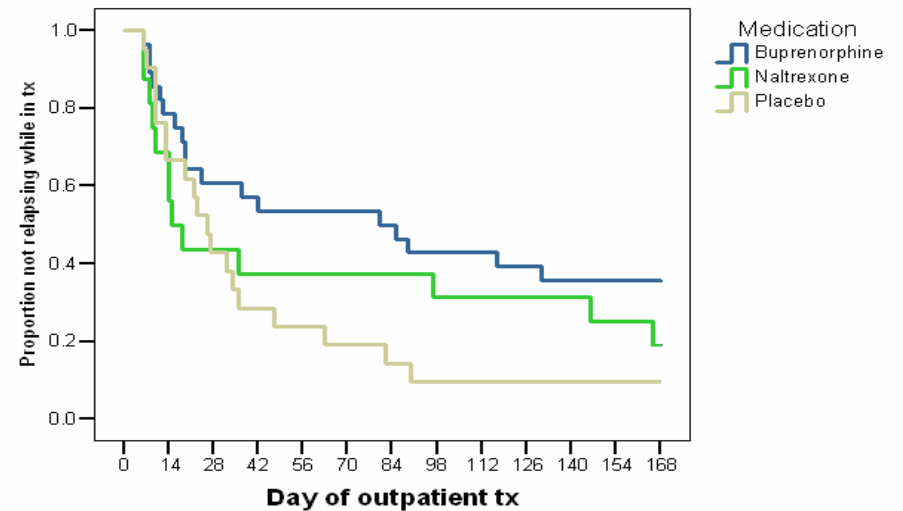
Longest duration of abstinence



Time to first heroin use after detoxification

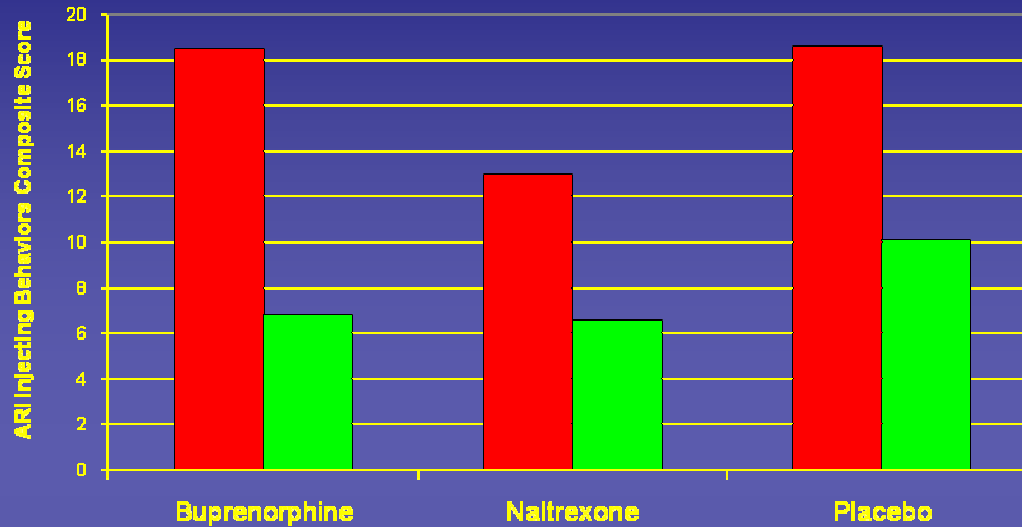


Time to heroin relapse after detoxification

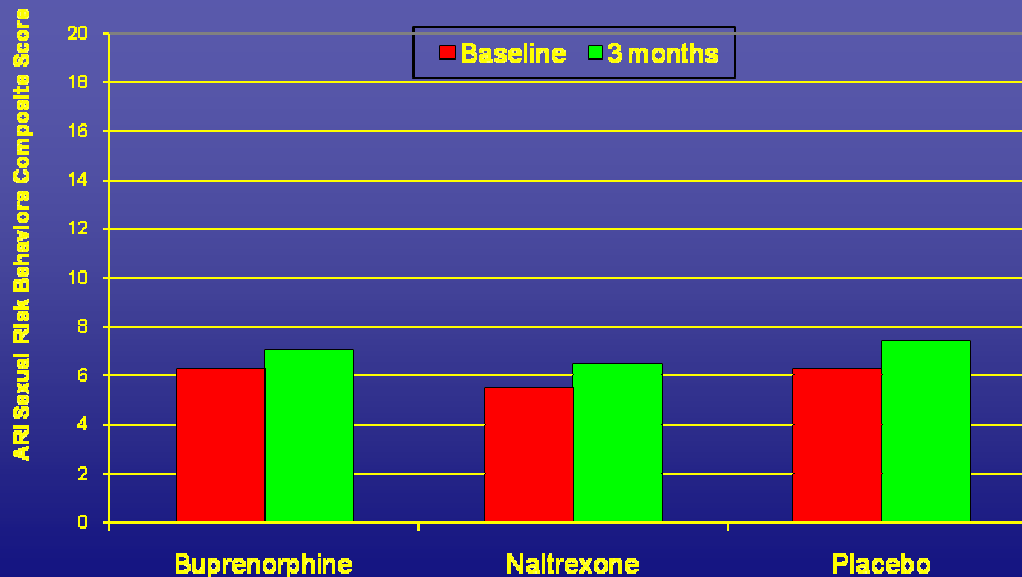


Changes in HIV risk behaviors

Reductions in drug related risks



No reductions in sex related risks



Study impact in Malaysia

- Buprenorphine maintenance treatment first introduced by our study in a research setting
- Subsequent rapid dissemination in general medical care
 - Subutex (buprenorphine mono tablets) approved in 2002 for maintenance treatment, including physician office dispensing
 - Methadone approved in 2003, including physician office dispensing
 - Suboxone (buprenorphine and naloxone combination tablet) approved in 2006, and Subutex withdrawn from the market due to serious diversion and abuse problems including injection use
 - ~ 30,000 patients on buprenorphine in private physician offices

Study implications

- Supports dissemination of buprenorphine (or an agonist) maintenance treatment **combined with drug counseling**
- Room for improvement
 - <50% completed entire treatment and <30% completed without relapse in buprenorphine group
 - Consistent with other studies, sexual risks were not reduced by drug treatment

Current challenges in Malaysia

- Small proportion of patients receive drug counseling or psychotherapy due to the limited number of trained personnel
- Targets of improved drug counseling
 - Increase treatment retention
 - Reduce drug use and instill lifestyle changes
 - Study participants noted beneficial effects of medications (especially, buprenorphine), but did not understand the importance of lifestyle changes in supporting long-term abstinence
 - Enhance medication adherence
 - Address sexual risks more effectively

Developing improved counseling

- We have developed an improved integrated drug abuse and HIV risk reduction intervention, Behavioral Drug and HIV Risk Reduction Counseling (BDRC)
 - Based on U.S. and International research outcomes, clinical feedback, and focus groups with patients
 - Founded on principles of cognitive-behavioral treatments and utilizes evidence based counseling approaches supported by research findings in cognitive and health psychology on effective behavior change
 - Designed to be provided by personnel available in resource poor countries, such as nurses, and not by psychologists, psychiatrists, or specialized therapists

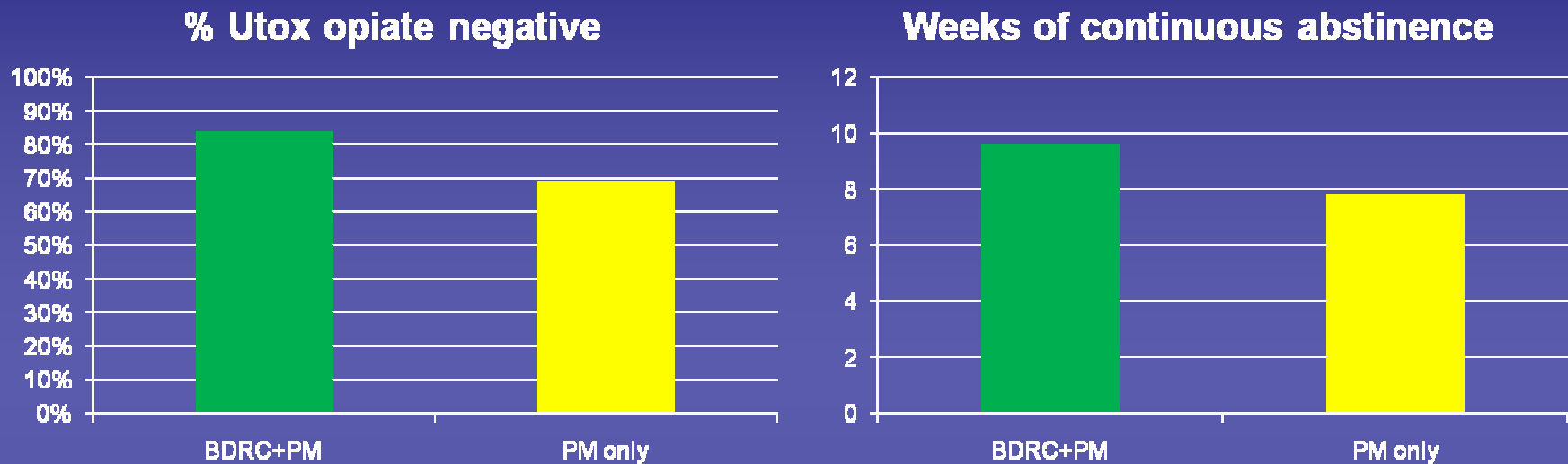
BDRC features

- Educational, directive, and prescriptive
- Uses short-term behavioral contracts aimed at improving treatment adherence and getting patients to make initial lifestyle changes, including
 - Cessation of drug use
 - Cessation of drug- and sex-related risk behaviors
- Provides immediate feedback and positive reinforcement of patient progress
 - Current research shows that positively- or gain-framed health promotion messages increase the likelihood of patient adherence to treatment recommendations and engagement in behavioral change
- Links the initial treatment gains with long-term recovery goals

BDRC efficacy – pilot study

- 16 week pilot RCT enrolling heroin dependent individuals (N=26) recently conducted in Muar, Malaysia
- All study participants received physician management (PM), consisting of brief, weekly visits with a physician
- Participants in the PM+BDRC group additionally received weekly individual counseling (provided by trained drug counselors)
- Patients in PM group received non-contingent weekly take-home doses of buprenorphine
- Patients in PM+BDRC group received abstinent contingent take-home doses of buprenorphine

Pilot findings



- Both groups significantly reduced HIV risk behaviors during treatment from pre-treatment baseline

Feasibility of implementing BDRC

- BDRC is feasible for implementation in resource poor countries

- Our studies demonstrate that medical personnel (nurses) available in resource poor countries can be trained to provide BDRC

- BDRC training to date

- 6 regular drug counselors in pilot studies in the U.S.
- 4 nurses in our current pilot studies in Malaysia provided BDRC; additional >20 nurses and other medical personnel in Malaysia received training in BDRC
- >20 counselors, nurses, or other personnel in several clinics in Thailand and China trained to provide BDRC treatment as a part of HPTN 058 research protocol
- 2 clinicians in Iran provided BDRC in pilot studies

Conclusions

- Effective treatment and prevention interventions, including a range of counseling approaches, are available
- Country- or region-wide healthcare policy should include a broad spectrum of treatment options including medications and a range of psychosocial interventions
- Research on local dissemination and implementation of effective treatments is critical to reach those most in need

Acknowledgments

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