

REPORT 3 OF THE COUNCIL ON MEDICAL SERVICE (A-01)

(June 2001)

The Effects of Individually Owned Health Insurance on Risk Pooling and Cross-Subsidization
(Informational Report)

EXECUTIVE SUMMARY

A key component of the AMA's long-range plan for reform of the U.S. health insurance system involves changing the tax treatment of health insurance expenditures so that individually selected and owned health insurance is a viable alternative to employer-selected insurance. Potential fragmentation of existing employment-based risk pools is a concern sometimes raised about an individually-based system.

Council on Medical Service Report 3, which is presented for the information of the House of Delegates, briefly defines risk pooling, cross-subsidization and related insurance concepts. The report finds that fears about "risk pooling" under individually owned health insurance are based on the following long-held but questionable assumptions:

- (1) the employer market for health insurance does a good job of "pooling risk" (i.e., providing cross-subsidies from low to high risk people);
- (2) the individual market for health insurance does a poor job of "pooling risk";
- (3) the removal of the tax preference for employment-based insurance is likely to result in the precipitous demise of the existing system;
- (4) employment is a unique way to group risk; and
- (5) cross-subsidization across risk groups requires "balanced" risk pools and/or community rating.

The report concludes that there are theoretical and empirical challenges facing each of these assumptions. In particular, the Council believes that too much attention has been paid to the balance of risk pools and not enough to the size of risk pools. Under an individually based system, individuals and employees at small firms will have new opportunities to join larger groups, opportunities which will be facilitated by the development of health insurance marts and by the Internet. Further, a myriad of public policies will continue to be available to promote cross-subsidization from low-risk to high-risk individuals.

REPORT OF THE COUNCIL ON MEDICAL SERVICE

CMS Report 3 A-01
(June 2001)

Subject: The Effects of Individually Owned Health Insurance on Risk Pooling and Cross-Subsidization

Presented by: Joseph M. Heyman, MD, Chair

1 Council on Medical Service Report 9 (A-98) described the AMA's long-range plan for reform of
2 the U.S. health insurance system, which involves a preference for individually selected and owned
3 health insurance. A key component of the AMA's proposal involves changing the tax treatment of
4 health insurance expenditures so that individually selected and owned health insurance is a viable
5 alternative to employer-selected insurance. A system that encourages individual ownership of
6 health insurance through tax incentives, however, does not obviate the need for mechanisms to
7 group risks. Hence, another key component of the AMA's proposal is fostering the development of
8 health insurance marts (i.e., voluntary choice cooperatives) to facilitate and expand patient choice.

9
10 Potential fragmentation of existing employment-based risk pools is a concern sometimes raised
11 about an individually based system. Because employment-based risk pools consist of people who
12 have come together for reasons unrelated to health risk, they are regarded as "balanced." In
13 contrast, an individually based system would create greater opportunity for risk segmentation (i.e.,
14 people self-sorting into plans on the basis of risk). In addition, if some employers disengage from
15 providing health insurance, more low-risk individuals might opt out of health insurance altogether.
16 The concern is that with risk segmentation and forgoing of coverage by low-risk individuals, high-
17 risk individuals would no longer be grouped with – and cross-subsidized by – low risks. As part of
18 its ongoing efforts to refine the AMA's policy on individually owned health insurance, the Council
19 on Medical Service has prepared this informational report to address these concerns.

20 21 PREVIOUS POLICY REPORTS AND CURRENT AMA POLICY

22
23 Previous reports of the Council on Medical Service examined risk pooling under community rating
24 (CMS Report 10, I-93), managed care (CMS Report 1, I-94), Medicare+Choice (CMS Report 3, A-
25 97), and defined contribution systems (CMS Report 11, A-98), and identified mechanisms to limit
26 risk segmentation and preserve risk pooling, including risk-adjustment, reinsurance, and benefits
27 management. In addition, CMS Report 5 (A-99) studied existing employer health insurance
28 purchasing alliances as potential prototypes of individual health insurance marts, which could
29 preserve the pooling advantages of the employment-based system.

30
31 Several AMA policies aim to limit risk segmentation and address the needs of high-risk individuals
32 who would have difficulty obtaining health insurance outside the employment-based system.
33 Policies H-165.920(11) and (15), H-165.995, H-165.988, H-165.882(9), and H-165.992(1) (AMA
34 Policy Database) support the use of state high-risk pools. Policy H-165.882(9) advocates
35 community rating bands and the formation of voluntary choice cooperatives. Policy H-165.991
36 supports banning or revoking preexisting condition limitations. Policies H-165.992(1), H-185.968,
37 H-90.995, H-165.979, and H-165.980 support premium subsidies or other support for people who

1 are disadvantaged by low income, expensive or chronic illness, or disability. Policies H-165.915
2 and H-330.933 support the use of risk adjustment and reinsurance to limit risk segmentation.

3 RELEVANT INSURANCE CONCEPTS

4
5 Because the term “risk pooling” is often used imprecisely or for multiple meanings, this report
6 briefly defines risk pooling and related insurance concepts.

7 8 Two Functions of Insurance

9
10 The original purpose of insurance is to protect against financial risk due to adverse events such as
11 illness (i.e., the insurance function). In practice, insurance serves another major function:
12 transferring money from low-risk individuals to high-risk individuals (i.e., the cross-subsidization
13 function). Public policies designed to promote cross-subsidization can interfere with the insurance
14 function and vice versa. Public discussions about health policy often fail to distinguish between
15 these two functions. Similarly, the public does not understand tradeoffs between efficient
16 insurance and cross-subsidizing care for those who pose high risk. Blurring the distinction between
17 pure insurance and cross-subsidy objectives obscures value differences about their relative
18 importance, value differences which underlie much of the public debate about health policy. The
19 appendix of this report further illustrates these two functions of insurance.

20 21 Risk Pooling Defined

22
23 “Risk pooling” is often cited as the major advantage of the current system but is usually not well
24 defined. The term “risk pooling” has been used to describe both the pure insurance and the cross-
25 subsidization functions of health insurance. Because there are tradeoffs between these objectives,
26 and to the extent that they call for different public policy approaches, informed decision making
27 requires conceptual clarity about the various meanings of “risk pooling.” The term “risk pooling”
28 was originally used by risk and insurance theorists to describe people of homogeneous risk
29 purchasing insurance in large numbers, thereby reducing insurer risk and enabling premiums to
30 approach expected average claims costs (Example 1 in the appendix). Only more recently has “risk
31 pooling” been used to imply cross-subsidization across risk groups (Example 2) or, less often,
32 reduced administrative costs from group purchasing. In the context of current discussions about
33 individually based health insurance, it is clear that “risk pooling” refers primarily to cross-
34 subsidization. Concerns about “risk pooling” revolve around potential loss of the cross-
35 subsidization role that employment-based insurance plays or is believed to play.

36
37 To avoid ambiguity, the remainder of this report uses the more precise term “cross-subsidization”
38 to express transfers of subsidies from low to high risk individuals, and reserves the term “risk
39 pooling” for the pure insurance function of health insurance. It is also important to note that
40 without coverage, neither insurance nor cross-subsidization can occur. Thus, any system that
41 reduces the number of uninsured is likely to improve both the insurance function and cross-
42 subsidization.

43

1 CROSS-SUBSIDIZATION IN THE CURRENT SYSTEM

2
3 Existing Cross-Subsidization

4
5 Most (61%) Americans under age 65 obtain health insurance through their employer or the
6 employer of a family member. The conventional wisdom is that there is a great deal of cross-
7 subsidization in the large employer market, a lesser degree in the small employer market, and
8 virtually none in the individual market. A recent study by Pauly and Herring (1999) examined how
9 well private insurance markets actually provide cross-subsidies from low to high risk individuals.
10 Their study focused specifically on the question of whether employment-based group insurance is
11 more effective than individual insurance at cross-subsidization. They found that the difference
12 between these markets is much less than commonly believed.

13
14 The Individual Market

15
16 Pauly and Herring found that the individual market was much less effective in segmenting risks
17 than one would believe based on insurers' stated and presumed intentions, (i.e., to risk rate, select
18 low risk individuals, and avoid high risk individuals). Although premiums for a given level of
19 coverage vary considerably, the variation is far from proportional to risk. Specifically, people with
20 estimated expected costs twice the average pay premiums only about 20-40% higher for a given
21 insurance policy. Further, premiums do not appear to vary with the presence of high-risk chronic
22 conditions. Thus, it seems that in 1987, even before states legislated community rating in the small
23 group and individual markets, there was de facto community rating in the individual market. The
24 problem Pauly and Herring find with the individual market is not so much lack of cross-
25 subsidization but that premiums are high relative to benefits for everyone, regardless of risk. High
26 premiums are due to the high per-person costs of administering and marketing insurance to
27 individuals compared to groups. Premiums that are high – and, further, not subsidized by a tax
28 exclusion – discourage people from purchasing insurance on the individual market.

29
30 The Employment-Based Group Market

31
32 Analysis of cross-subsidization across risk groups in the employment-based group market is
33 confounded by the fact that, nominally, employers pay some portion of their employee's health
34 insurance premiums. The portion paid by the employer varies widely across firms, though not by
35 risk. Both economic theory and empirical evidence maintain that employees, in the aggregate, pay
36 indirectly for most or all of the employer's share of premiums in the form of lower wages. What is
37 not known is exactly how individual employee's wages are reduced by health insurance premiums,
38 and the degree to which individual employees' effective premium payments vary with risk.

39
40 However, there is evidence that reductions in wages are not spread evenly. Specifically, Pauly and
41 Herring found that seniority wage raises are lower for employees who obtain insurance through
42 their employer than for those who do not. This suggests that older employees effectively pay more
43 for their insurance than younger employees, though not by enough to compensate for higher
44 expected costs, (i.e., younger employees still subsidize older employees). On the other hand,
45 wages did not appear to vary with the higher risk associated with being female or, remarkably,
46 having a long-term, chronic condition. Thus, there is some cross-subsidization across risk groups
47 in the employment-based sector, but not as much as is commonly believed.

48

1 Impact of Current Trends on Cross-Subsidization

2
3 Even in the absence of individual tax credits, two interrelated trends in the existing system point
4 toward expanded consumer choice, the possible dissolution of employment-based risk pools, and
5 increased risk segmentation. Defined contributions by employers, coupled with increasing use of
6 the Internet to purchase health insurance, promise to create more choice and, therefore, more
7 opportunity for risk segmentation. Increasingly, employers are seeking ways to reduce their role in
8 providing health insurance. One way for employers to disengage from arranging health insurance
9 without “abandoning” employees, or the existing tax advantages of employment-funded insurance,
10 is to give employees a fixed-dollar amount or defined contribution for the employee to use on the
11 open market toward coverage of his or her choice. The Internet can facilitate this process by
12 reducing administrative and marketing costs, and by giving individuals access to comparative
13 information on alternative health plans. As more low- and average-risk individuals switch from the
14 group market to the individual market, the payoff to insurers of risk rating premiums will diminish,
15 thus preserving cross-subsidies from low- to high-risk enrollees. In addition, the trends of defined
16 contributions and Internet-purchasing do not preclude group purchasing through groups other than
17 employment-based groups. A separate report before the House of this meeting (CMS Report 5,
18 A-01) discusses evolving Internet-based health insurance markets.

19
20 PUBLIC POLICY OPTIONS

21
22 To the extent that increased cross-subsidization across risk groups is deemed socially desirable,
23 there are a number of public policies to promote cross-subsidization from low-risk to high-risk
24 individuals. Public policies can promote cross-subsidization by manipulating insurance markets,
25 for example by acting on premiums, terms of issue or benefits. Other public policies promote
26 mixed-risk risk pools and cross-subsidization by limiting individual ability to switch plans. A third
27 category of less distortionary public policies achieve cross-subsidies by creating new opportunities
28 for group purchasing, or by providing direct subsidies to high risk individuals. It should be noted
29 that these public policies are not mutually exclusive and can be used in various configurations.

30
31 Public Policies That Act on Insurance Markets

32
33 In the last decade, many states have implemented regulations in the individual and small-group
34 insurance markets. Community rating is the most common insurance market reform and is
35 designed to transfer subsidies from low-risk to high-risk individuals. Community rating stands in
36 contrast to risk rating, whereby each individual pays a premium that reflects his or her own
37 expected claims costs (i.e., an “actuarially fair” premium). Under pure community rating,
38 everyone in a given market who purchases a given plan from a given insurer pays the same
39 premium. Other forms of community rating include modified community rating and rating bands.
40 Other reforms affect the terms of issue of insurance plans. Terms of issue reforms include
41 guaranteed issue, guaranteed renewability, and restrictions on pre-existing conditions clauses.
42 These reforms create more cross-subsidization across risk groups than the market alone would
43 achieve (Nichols, 1999). However, evidence suggests that these same public policies have
44 contributed to increased premium costs, and thus to the number of uninsured (Custer, 1998).
45 Community rating and terms of issue reforms drive up premiums by making insurance less
46 attractive to low-risk individuals and more attractive to high-risk individuals, thereby driving up
47 average claims costs.

1 Benefits management is another approach to preserving mixed-risk risk pools and cross-
2 subsidization across risk groups. Benefits management can reduce risk segmentation arising from
3 self-selection by compressing variation in plan benefits, gatekeeping features, and cost sharing–
4 also effectively limiting consumer choice. Benefits management measures include standardized
5 benefits packages, carve-outs of selected benefits from regular health insurance options, and
6 mandates of specific benefits. Within the Federal Employees Health Benefits Program (FEHBP),
7 “high-option” health plans are protected from “death spirals” by reducing the difference between
8 high- and low-option plans in benefits covered, gatekeeping features, and cost sharing. Employers
9 that offer a choice of health plans sometimes control benefits in order to preserve high-option
10 plans, and thus cross-subsidies to people of above-average risk. Under a system of individually
11 owned health insurance, benefits management could also be undertaken by health insurance marts.
12

13 Public Policies That Limit Individual Ability to Switch Plans

14
15 Rules limiting individual ability to switch health insurance plans promote mixed-risk risk pools and
16 cross-subsidization across risk groups. Such rules promote mixed-risk risk pools and cross-
17 subsidization by preventing “gaming of the system.” Knowing that they will not be able to
18 suddenly switch to more generous coverage should they become sick or injured, people of all risk
19 groups are encouraged to obtain adequate coverage. Policies that limit individual ability to switch
20 plans include coordinated annual open enrollment season, opt-out penalties imposed on employees
21 choosing to forgo health coverage provided through the employer, enrollment for multi-year
22 contract periods, and a mandate requiring individuals to obtain health coverage. Finally, a single
23 payor system would create the ultimate risk pool but at the expense of individual choice, market
24 competition, and incentives to develop new technologies. Long-standing AMA policy opposes
25 single-payor systems (Policies H-165.985 and H-165.916).
26

27 Less Distortionary Public Policies

28
29 A third category of less distortionary public policies achieves cross-subsidies by creating new
30 opportunities for group purchasing or through targeted subsidies. Such approaches include health
31 insurance marts, risk adjustment, reinsurance, outlier pools, high risk pools, and direct premium
32 subsidies for high risk individuals. These public policy options challenge the common
33 misconception that cross-subsidization requires “balanced” risk pools or community rating.
34

35 Health insurance marts are alternative ways to pool risk beyond employment-based pooling. Under
36 a system of individually owned health insurance, institutions such as churches, trade associations,
37 and chambers of commerce could serve as health insurance marts, offering members the
38 opportunity to purchase group health insurance. Health insurance marts would facilitate individual
39 choice of health plans by assuming the roles that employers play in the current system: screening
40 and negotiating with plans; education about plan features; and streamlining enrollment and
41 premium collection. Within a health insurance mart, enrollees of a given plan would most likely
42 pay uniform premiums, thereby transferring subsidies from low to high risk individuals, and
43 reducing underwriting (risk-rating) costs. Cost savings in administration and marketing, from
44 premium negotiations with insurers, and from exemption from state benefits mandates would
45 enable health insurance marts to attract even low risk enrollees.
46

47 Within a health insurance mart, premiums could be risk adjusted. Under risk adjustment, subsidies
48 are made from plans with a disproportionate share of low risk enrollees to plans with a

1 disproportionate share of high-risk enrollees. Risk adjustment helps high-risk individuals by
2 reducing health plans' financial incentives to avoid high-risk enrollees, and by encouraging plans
3 to attract high-risk enrollees (e.g., by developing expertise in treating chronic conditions).
4 Alternatively, risk adjustment can also be applied to amounts given to individuals toward the
5 purchase of health insurance (e.g., employer contributions, vouchers or individual tax credits).
6 Reinsurance and outlier pools are other ways to make enrolling high-risk people more palatable to
7 insurers. Reinsurance compensates health plans that experience costs exceeding some
8 predetermined limit. Outlier pools compensate plans for individuals whose costs exceed some
9 limit regardless of the plan's overall costs, or for enrolling unusually high numbers of people with
10 specified, high-cost medical conditions. Whether reinsurance or outlier pools are financed by
11 insurers or through general taxes, they ultimately subsidize coverage for high-risk individuals.

12
13 High-risk pools are another way to finance health services for those with high expected costs. This
14 approach has the advantage of permitting insurance markets to function properly without undue
15 challenges of meeting the needs of people with predictably and extremely high costs. Most high-
16 risk pools are very small. When they provide reasonably comprehensive coverage, are subsidized
17 by general tax revenues or compulsory insurer contributions, and are not limited by enrollment
18 caps, they permit the individual market to function better (Nichols, 1999). When insurers know
19 that they are unlikely to end up with extremely high-risk enrollees in the "regular" market, they can
20 offer lower premiums, which in turn attracts more enrollees, including those of low risk.

21
22 Premium subsidies targeted to high-risk individuals are a more explicit way to provide collective
23 subsidies to those with high expected medical costs. They also have the virtue of allowing high-
24 risk individuals choice of health plan. Like risk adjusted payments to plans, they make high-risk
25 individuals more attractive to plans.

26 27 INDIVIDUALLY OWNED HEALTH INSURANCE

28 29 Group Purchasing

30
31 A common misconception about individually based insurance is that insurance would not be
32 purchased through groups, and further, that individuals would face risk-rated premiums. In fact,
33 health insurance marts would facilitate group purchasing. Even in the absence of community rating
34 regulations, all members of a group who purchase a given plan would likely pay uniform or nearly
35 uniform premiums, as with existing employment groups. In the FEHBP program, the large number
36 of members affords plans economies of scale, and the diversity of risks obviates the payoff to
37 insurers for individually risk rating. Thus, low-risk individuals cross-subsidize high-risk
38 individuals, as would continue to be the case under a system of individually owned insurance.

39 40 Coverage

41
42 By definition, risk pooling in the original sense (i.e., insurance) will be fostered by any system that
43 expands net coverage of the population. Further, people who are uninsured do not directly
44 participate in a system of cross-subsidized premiums. By creating a system of tax credits for
45 individually owned health insurance and by promoting health insurance marts, the AMA proposal
46 would improve coverage for the following currently-disadvantaged groups:
47

- 1 • Employees whose employers do not offer health coverage. All employees will have access to
2 tax-subsidized health coverage regardless of their employer’s decision regarding health
3 benefits.
- 4 • Employees who decline employment-based health coverage due to cost.
- 5 • Employees of small firms, who are currently are much less likely than employees of large firms
6 to be offered employment-based health coverage (Branscome et. al., 2000).
- 7 • The unemployed. Everyone will have access to tax-subsidized health coverage regardless of
8 their employment status.
- 9 • The disabled who have become unemployed and lost access to employment-based insurance.
10 An individually based system would improve cross-subsidization as well as coverage for this
11 group.

12
13 Under an individually based system, the transformation of the insurance market will also impact
14 premium costs and therefore the rate of coverage in the following ways: (1) increased individual
15 choice of health insurance will create competitive pressures for plans to operate efficiently and
16 hold down prices; (2) the market will offer a wider range of insurance products, including more
17 lower-priced options affordable to the currently uninsured; (3) exemption of plans offered through
18 health insurance marts from costly state mandates will have a dampening effect on premiums; and
19 (4) the reduction in the uninsurance rate will permit providers to reduce prices that may currently
20 be artificially elevated in order to pay for uncompensated care.

21 22 Employment-Based Risk Pools

23
24 What about the potential fragmentation of existing employment-based risk pools? This concern is
25 a transition issue in that, under the new system, low-risk individuals will continue to cross-
26 subsidize high risk individuals, and public policy safeguards are available to improve cross-
27 subsidization, as discussed above. It is also important to bear in mind that any decline in employer
28 offer rates would not pose a problem for the majority of the uninsured, who are employed but who
29 do not have employment-based insurance. In any case, even in the absence of a tax advantage,
30 large employers will still have a comparative advantage in arranging health insurance. Even in the
31 long run under the new system, some employers will continue to arrange health insurance in order
32 to attract and retain employees, whether or not they pay for insurance.

33
34 Concerns also have been raised that with expanded choice, low-risk individuals might leave
35 employment groups disproportionately because they wish to take advantage of lower-priced,
36 possibly less generous options. Although opting-out by low-risk employees would diminish cross
37 subsidies within employment groups, it is important to recognize that the expanded choice benefits
38 those leaving the employment group, and that cross-subsidization will occur in the newly formed
39 groups. In order to preserve balanced risk pools and appease insurers, some employers might
40 discourage employees from opting out of employment-based insurance, for example, by paying
41 only for insurance through the employer or by paying less for insurance purchased elsewhere.

42 43 CONCLUSION

44
45 Fears about “risk pooling” under individually owned health insurance are based in part on certain
46 long-held but questionable assumptions:

47

- 1 (1) the employer market does a good job of “pooling risk” (i.e., providing cross-subsidies from
2 low to high risk people);
3
 - 4 (2) the individual market does a poor job of “pooling risk”;
 - 5 (3) the removal of the tax preference for employment-based insurance is likely to result in the
6 precipitous demise of the existing system, and therefore a loss of subsidies for people of above-
7 average risk;
8
 - 9 (4) employment is a unique way to group risk; and
10
 - 11 (5) cross-subsidization across risk groups requires “balanced” risk pools and/or community rating.
12
- 13 As has been discussed in this report, however, each of these assumptions faces serious challenges
14 on theoretical and/or empirical grounds.
15
- 16 The Council believes that too much attention has been paid to the balance of risk pools and not
17 enough to the size of risk pools. Under an individually based system, individuals and employees at
18 small firms will have new opportunities to join larger groups, opportunities which will be
19 facilitated by the Internet. Further, a myriad of public policies will continue to be available to
20 promote cross-subsidization across risk groups.

References for this report are available from the AMA Division of Health Care Financing Policy.

Appendix

THE INSURANCE VS. CROSS-SUBSIDIZATION FUNCTIONS OF HEALTH INSURANCE

These examples illustrate the difference between the pure insurance and cross-subsidization functions of health insurance. In order to highlight the differences, the examples abstract from issues such as types of health plans, specific benefits, and patient cost-sharing. Patients are assumed to have no control over whether they experience illness in a given year.

Example 1. Pure Insurance

In the first example, there is a homogeneous group of insureds, each of whom faces a 20% chance of experiencing an illness requiring \$1,000 of medical treatment during the contract year. Thus, at the beginning of the year, each individual has *expected costs* equal to the average cost for the group, or \$200. During the year, approximately 80% of the insureds incur *actual costs* of zero, whereas approximately 20% of the insureds incur actual costs of \$1,000.

Being risk averse, these individuals are willing to pay *more than* \$200 to transfer the financial risk of medical costs to the insurer. They prefer the certainty of paying a premium of \$200 plus some amount, rather than face the possibility of incurring a relatively large expense of \$1,000. (How much more than \$200 they are willing to pay is an empirical question. The point is that people's willingness to pay premiums greater than their expected costs enables insurers to charge a markup for administrative costs.) Premium revenues of both "lucky" and "unlucky" are used to pay the medical expenses of the unlucky 20%-or-so who experience illness.

From the insurer's point of view, the more people who join the group, the more predictable costs will be. In other words, because of the law of large numbers, the larger the risk pool, the smaller the variance in average cost, and the lower the insurer's financial risk. In this example, as group size increases from 10 to 100,000, the standard error of costs drops from \$133.33 to \$1.26. The larger the group, the lower the insurer's reserve fund needs to be to protect against the possibility of an unusually high number of illnesses and of average costs greater than \$200. Thus, the larger the group, the lower the premium can be. (This is true independent of the fact that average administrative costs also go down with group size.)

Example 2. Insurance with Cross-Subsidization

In the second example, the insurer covers two types of people in equal proportions; low-risk types (Type A), and high-risk types (Type B). Type A's face a 20% chance of experiencing illness requiring \$500 of medical treatment, whereas Type B's face a 20% chance of experiencing illness requiring \$1,500 of medical treatment. (Alternatively, Type B's are high risk because they face a 60% chance of having costs of \$500). As before, average costs overall are \$200, but now Type A's each have expected costs of \$100, and Type B's each have expected costs of \$300.

We assume that even Type A's are willing to pay more than \$200 to insure against the financial risk of medical costs. (Or Type A's might be unaware of their direct and indirect premium costs if they have employment-based health insurance.) We also assume that the insurer charges both types the same premium, either because they are unable to differentiate between high and low risks,

because all of the insureds belong to the same employment group or because of strict community rating regulations. As in Example 1, premium revenues of both “lucky” and “unlucky” are used to cover the costs of the unlucky who fall ill. However, in this case, a second type of income transfer also occurs. Type A’s subsidize the health care costs of Type B’s since both types pay a premium equal to average cost (plus markup) but Type A’s have below-average costs and Type B’s have above-average costs.

So long as the insurer knows at least roughly the probability that any newcomer to the group is a given type and the expected costs for each type, the law of large numbers still applies. The larger the group, the more predictable costs will be, and the lower the premium can be. Thus, this example represents both pure insurance and cross-subsidization from low risks to high risks. (If premiums were strictly risk-rated, then Type A’s would pay premiums of \$100 plus markup, and Type B’s would pay premiums of \$300 plus markup. In this case, there would be insurance without cross-subsidization.)